THE

FARMER'S MAGAZINE:

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(No. III.)

PART I.

ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

The Rural Inquirer, No. 2.

Certainly we are all afraid leſt our plenty ſhould be our ruin, or elſe men that ſtudy ſo much to get eſtates at ſecond hand from one another, would rather ſtrive to get them at firſt hand out of the earth.

Blythe's Improver improved.

A NOBLE Engliſh Peer, at a late public meeting, (as we are informed by a reſpectable correſpondent), hardily declared, that the modern agricultural improvements, inſtead of being beneficial, had proved injurious to the public welfare. 'What,' ſaid his Lordſhip, 'have not rents riſen ſince waſte lands were generally cultivated? Have not proviſions of all kinds increaſed in price? and has not ſtock, *i. e.* cattle and ſheep, equally advanced?' The company ſilently heard his Lordſhip, and thereby tacitly acknowledged the juſtice of his obſervations.

We have often obſerved, with ſurpriſe, the averſion of the generality of landed proprietors to the diviſion and incloſure of waſte lands, without being able to trace it to any well founded cauſe. Perhaps ſentiments ſimilar to thoſe avowed by this noble Peer, may have influenced their conduct, and contributed to fix ſuch immenſe tracts of the national territory in their preſent unproductive ſtate. This, in fact, is

the moſt charitable reaſon that can be aſſigned, for their oppoſition to meaſures of ſuch obvious utility. If meliorating and improving the waſte lands were neceſſarily ſucceeded by ſuch miſchievous conſequences, undoubtedly they ought to remain as they are, or be effaced from the map of Britain, as containing matter within them deſtructive to the public intereſt.

But as we do not view the ſubject in the ſame light with his Lordſhip, and conſider a large moiety of the waſte lands ſuſceptible of material improvement, we look upon an increaſe of proviſions as an important branch of political economy.—Under theſe impreſſions, we ſhall ſeize upon his Lordſhip's ſpeech for the ground-work of this Number, and endeavour to make up for the deficiency of his friends.

We admit, at once, that the rent of land has greatly riſen, and that the price of every article of proviſions has alſo increaſed, notwithſtanding the extenſive improvements that have taken place, within the period of fifty years, over every part of this iſland; but it would be abſurd to ſuppoſe, that, under this admiſſion, theſe circumſtances were produced by the cultivation of waſte lands, or by the ſuperior attention now almoſt univerſally beſtowed upon the cropping of the ground; which, in fact, includes all that goes under the name of modern improvements. The proportion of the waſtes, formerly unproductive, but now brought into a condition for carrying crops of corn and artificial graſſes, has moſt aſſuredly augmented the quantity of proviſions; and this quantity could not be leſſened by the ſuperior attention now paid to dreſſing and cropping of the old arable fields: the reverſe muſt neceſſarily have been the fact: and if the circumſtances of the country, *in other reſpects*, had remained as formerly, or if improvements had kept pace with the increaſe of luxury, and the increaſed numbers of the people, it is apparent, that as the means of ſubſiſtence were ſo conſiderably augmented, their value would conſequently have ſuſtained a great diminution.

Three cauſes have occurred, which effectually prevent improvements from producing a reduction of the price of proviſions; theſe are, the increaſe of luxury, the increaſe of population, and a diminution in the value of money. The two firſt are real preventives; the laſt may be conſidered as merely nominal; at leaſt, ſo long as the value of labour bears an affinity to the ſcale of prices at which the neceſſaries of life can be procured.

To

To a perſon in the leaſt degree acquainted with the ſtate of Britain in former times, the great difference in the mode of living among the majority of the people, would be a ſatisfactory inſtance, that a much greater extent of produce is now required to ſupport an equal population, than what was neceſſary even within the ſhort period of our remembrance. In the *firſt* place, The demand for butcher meat is at leaſt twice as great as it was twenty years ago: this is confirmed, not only by general obſervation, but by the ſales in the different markets, as well as the ſuperior weight of the animals therein expoſed. This increaſed demand has occaſioned a greater quantity of land to be thrown into paſture than formerly; under which ſyſtem it is evident, that a given ſpace of land will not maintain one half ſo many people, as when employed in producing corn crops, and eſculent roots. 2*dly*, The increaſed number of pleaſure horſes, and thoſe employed in hired carriages, ariſing from the growing proſperity of the country, occaſions a conſumption of much grain; which in former times, would have gone to the ſupport of the people.

Hence it appears, that a greater ſpace of ground is now required, not only for ſupporting the number of cattle and ſheep adequate to the ſupply of the markets, but alſo for producing corn, ſo as the crops may be equal to the average demand. Had luxury arrived at its preſent height, without being preceded by an increaſe of culture, it is demonſtrable, that the produce of the country, even in the beſt years, could not have ſupplied three fourths of the preſent extenſive demand.

An *increaſed population* is the ſecond cauſe which has prevented improvements from reducing the price of proviſions. Upon this point, we are well aware, that ſeveral political writers entertain ſentiments unfavourable to this opinion; and that it is ſcarcely poſſible to remove their objections, without an actual numeration. This has already taken place in Scotland, though perhaps not ſo correctly, in many inſtances, as could be wiſhed; and the reſult fully confirms the general ideas formed by us upon the ſubject. But, to ſpeak to the population of Britain. To whatever quarter we turn our eyes, we ſee an increaſe of trade, an increaſe of manufactures, and an increaſe of ſhipping for carrying on the coaſting trade, and tranſporting our commodities to foreign markets. We diſcern public works of every kind going briſkly forward, while a greater number of ſailors and ſoldiers are

employed in the national ſervice, than in any former war. Notwithſtanding the immenſe numbers thereby taken from ordinary labour, no ſcarcity of hands is diſcovered for executing the moſt extenſive territorial improvements; but every thing goes on as if the preſent was the moſt peaceable æra. When we compare theſe things with what actually happened during the American war, when labourers could not be procured, when foreign ſailors navigated our merchant veſſels, when the navy could not be manned, and when our army was conſtantly non-effective: We ſay, when we make ſuch a compariſon, the warrantable concluſion muſt be, that the population of Britain has of late rapidly increaſed, and that its progreſs has been uniform and ſteady, ſince the concluſion of the unhappy and unfortunate war with our ancient colonies.

Again, the alteration in the value of money has prevented improvements from reducing the nominal price of the neceſſaries of life; we ſay, the nominal; becauſe, if a man will not give as much labour for ſixpence as formerly, he is not entitled to receive the ſame neceſſaries for that ſum as he formerly procured. It is evident that proviſions have been lower, upon an average, during the preſent century, when compared with the value of money, (laying aſide their rate at this diſtreſſing period, when a ſcarcity, unparalleled in the annals of our hiſtory, prevails, which, by the by, would have been greater without improvements), than for the century preceding. We know no better rule for aſcertaining this matter, than a comparative view of the price of bread during each century, with the wages earned by the labourer or manufacturer, during the ſame period. Such a compariſon will ſhew, that the latter, in the courſe of a century, has advanced full as much as the former; conſequently, that the rate of rents, proviſions, ſtock, &c. ſagaciouſly ſtated by the Noble Peer at the meeting alluded to, as an objection to agricultural improvements, is merely imaginary; and that, in ordinary years theſe things will conſtantly bear an affinity to each other, if left to find their own level.

The diviſion and incloſure of common fields and waſtes, from the number of incloſure bills paſſed in Parliament, have perhaps increaſed the quantity of productive land in the kingdom, at the rate of a quarter *per cent. per annum*, for fifty years back; in other words, the land now in condition for carrying crops of corn and graſs, exceeds what was in that ſtate in the year 1750, at the rate of 12½ *per cent.* If we add to this, the augmentation

augmentation of produce arising from a superior cultivation, which may safely be calculated at the same extent, it will appear that Britain now produces one fourth more food for man and beast, than it did fifty years ago.

Now, if these improvements, so much complained of by the Noble Lord in question, had not been made, what would have been the inevitable consequences? Precisely these: either one fourth of the inhabitants would have been obliged to emigrate, or a quantity of provisions, equal to what is gained from the modern improvements, must have been imported from other countries, at an expence greater than the balance of trade in favour of Britain could possibly defray, and which in time would have impoverished the country. Under present circumstances, it is obvious, that a still greater portion of waste land ought to be brought into a state of cultivation, to meet the progress of trade, luxury, and population; and we venture, without fear of contradiction, to affirm, that whenever this extent of improvement accomplishes a depreciation of rents, or reduces the price of provisions below their ordinary level, that then the prosperity of Britain is on the decline; that trade and manufactures have met with a check; and that population is decreasing, from a want of employment to the usual inhabitants.

We have, in this Number, deviated from the line marked out in our first Paper; but before we described the different modern improvements, we thought it absolutely necessary to ascertain, whether or not these improvements contributed to promote the real welfare and prosperity of the country with which we are connected. R.

FOR THE FARMER'S MAGAZINE.

A Rural Sketch of the County of Lancaster.

"Tempus in agrorum cultu consumere dulce est." OVID.

It is easier to submit to the toil of travelling, than to turn travels to solid advantage. An intelligent, industrious mind, can never be a loser by a change of place and circumstances. Much individual profit may be reaped, yet little

may be added to the ſtock of public utility. Many of our modern touriſts, amidſt a multitude of pages, do nothing more than perform the part of triflers; they unhappily abound in verboſity of manner, to the neglect of unfolding ſtores of ſenſe, and intereſting occurrences, to the eye of the world; perhaps from a perſuaſion, that man ſeeks, at times, to be amuſed in the foreſt, no leſs than to be ſeriouſly employed in the fertile field.

During a reſidence of three months in Lancaſhire, a multitude of diverſified obſervations were made, and ſhall be detailed without order or partiality, freſh and glowing as they were written on the mind.

Lancaſhire is one of the leading counties of England, meriting regard, not ſo much for extent of ſurface, as for the degree of population, and the active ſpirit of the inhabitants of all deſcriptions. According to the lateſt calculations, it claims 425,000 inhabitants, and 1,129,600 acres *. Notwithſtanding a late prodigious decreaſe of people, Lancaſhire appears ſtill to be inferior in population to Middleſex only.

A traveller is ſtruck with ſurpriſe and ſorrow, to obſerve ſo extenſive, delightful a diſtrict, in an uncultivated condition, decked with invariable green. The love of paſturage prevails. Agriculture, the mother of a thouſand conveniences and comforts, though not deſpiſed, is much neglected. The whole tract of land, low and fertile, is favourable to aration; but few fields are allowed to ſuffer or to enjoy the preſſure of the plough. It is not by proper periodical tillage, but rather by perpetual reſt given the grounds, that riches are expected. A park is covered with corn once in twelve years, or ſeldomer, if the old graſs is not ſo deteriorated as to be unfit for paſture.

Manufactures and commerce completely triumph over agricultural purſuits. The factory brings more money than the farm. All the ingenuity, the zeal, the perſeverance of man, are vigorouſly exerted to invent or perfect various arts of life; while the firſt, the ſimple art of operating on the ſoil, obtains tranſient attention. The ſame perſon cannot, at the ſame moment, both navigate the ocean, and cultivate the earth. Put Manchester and Liverpool together, you form another London. United, they may be conſidered not leſs the emporium of the weſt, than the metroplis is of the eaſt of Britain.

The

* Middleton's Review of Middleſex.

The ſituation of Lancaſhire boaſts of advantages, ſuited to the views of manufacturing and commercial men, which few countries poſſeſs. Mines of coal and fountains of water, navigable rivers and numerous canals, found everywhere, invite enterpriſing individuals to form a ſettlement. Waſhed by the ocean for many miles of coaſt, Lancaſhire can export multifarious ſuperfluities, and receive in return all the articles, that neceſſity, curioſity, cupidity, or caprice, can demand. External intercourſe with foreign nations is eaſy; internal navigation is commodious. A nobleman of immenſe fortune *, an example to all of the ſame high order, devotes his attention to trade; and, by means of a canal of his own, ſtretching at leaſt forty miles without a ſingle lock, covered with veſſels of various ſizes, moving in different directions, facilitating interior communication, increaſing the general proſperity, carries on an extended lucrative buſineſs. The induſtry of the people, greatly favoured by nature, nouriſhed by the countenance of ſuperiors, is diſplayed and manifeſted, not in raiſing rural productions, but in working up raw materials.

The exiſtence of *tithes* is an effectual obſtruction to all rural improvements. The farmer will not ſow, when the clergyman reaps. If a cultivator, of inferior capital, can avoid a partial, oppreſſive, odious ſyſtem, as is that of taking tithes; if, by a different mode of management, he can lawfully prevent a ſtranger from devouring a tenth of the fruits of his labours; if he can ſecure to his family an excluſive right to all the advantages his induſtry hath acquired, how can he be blamed? What does he do more than every other man would attempt? Chriſtianity, with all its able, eloquent, faithful, public advocates, ought to be ſupported, but never by the oppreſſion of a particular claſs of reſpectable, induſtrious citizens. The patron ought to be made reſponſible with his own funds, whenever a clerical man is impoſed on a pariſh, in direct violation of the beſt inclinations, the acknowledged rights, the nobleſt intereſts of the people. There are many neglected ſtarving curates in England; but, if the lands are always unſown and unreaped, the writer ſhould not be ſurpriſed to ſee ſtarving vicars too, and rectors who could no longer afford to ſpend their uſual pleaſurable months at Bath. Tithes produce two unhappy effects, creating a rooted averſion to a national church, and depreſſing the ſpirit of agricultural adventurers. A mind

* The Duke of Bridgewater.

inflamed by animofity, exafperated by prejudice, will fuffer the beft fields to be overrun with brambles, rather than contribute, by conftraint, to an obnoxious tax, impofed to fupport the clergy. While the intolerable fyftem is not difcontinued, we may expect to fee agriculture declining, corn decreafing in quantity, enhanced in price; feafons of fcarcity periodically returning, and our country left to the mercy of foreign markets. The tithe-laws and the game-laws are enormous national evils, that cannot be too fpeedily abolifhed.

The fhambles of Lancafhire demand immenfe fupplies, arifing from the increafed crowded population, operating in favour of grafs more than of corn. The extravagant price of provifions in February, were equally unprecedented as in North Britain, irritating the paffions of the multitude, and producing, in various places, the moft tumultuous affemblages. Several of the leaders have been apprehended, imprifoned, and muft ftand trial at the affizes in Lancafter.—The rent of land in the immediate vicinity of Manchefter is fix guineas an acre. A.

FOR THE FARMER'S MAGAZINE.

Letter from a Scots Farmer, during a Tour through England.

LETTER III.

My laft having concluded with our arrival in the capital of the Britifh empire, I fhall now endeavour to give you a haſty detail of the various circumftances that came under our obfervation during the few days we remained in that overgrown city.

The firft thing that ftruck my attention, upon iffuing from our lodgings, was the immenfe multitude of people, poſting along as if they were walking or running for wagers, and the great throng of carriages of all defcriptions which filled every ftreet. Cuftom, or law, has, however, ordered thefe matters fo well, that the greateft regularity is conftantly preferved. By taking one line, the foot-paſſengers upon

upon the pavement follow each other like ſoldiers upon a march, while thoſe going in a contrary direction, by following the ſame rule, paſs on without the ſmalleſt interruption. In the driving of carriages, the ſame plan is ſtrictly adhered to, it being no uncommon matter to ſee the *Strand* filled with two lines of machines from the one end to the other.

Here it may not be improper to ſay a few words concerning the admirable police maintained in London, which is infinitely ſuperior to that of any other city in the kingdom. I had recently peruſed Colquhoun's treatiſe on that ſubject, and certainly had formed very different ideas from thoſe afterwards realized by obſervation and experience. During the time of my reſidence, I did not diſcern the leaſt inclination to rioting or breaking the peace; and the ſtreets, at night, were as quiet and undiſturbed as thoſe of our northern metropolis. In this reſpect, as well as in many others, London holds out a pattern to other great towns, where, though the population is infinitely leſs, their police is much more defective.

After ſauntering through the ſtreets at the weſt end of the town, examining Weſtminſter-Abbey and other public buildings, we arrived at St James's palace, juſt in time to ſee the King ſtep out of his carriage at the gate. His Majeſty is a ſtout healthy man, of a florid countenance, rather corpulent; but as he takes a great deal of exerciſe, we have every reaſon to hope that he will long be preſerved in this world, *as a bleſſing to his ſubjects, and a ſafeguard to the welfare and happineſs of Europe.*

Paſſing by the public office in *Bow-Street*, we ſtepped in, and had an opportunity of witneſſing the celebrated Mrs Jane Gibbs lodge her accuſation againſt a decent-looking man at the bar, for robbing her in Kenſington-gardens. She appeared unconnected in her depoſition; and, notwithſtanding every exertion of the magiſtrates, could not be kept to the point during the examination. Charitable people attributed the eccentricity of her behaviour to the agitation of mind occaſioned by ſuch a public appearance; and the magiſtrates, after making every attempt to aſcertain the truth, were under the neceſſity (the accuſer's character being then unknown) of committing a man for trial, who was in reality innocent.

As all the world flocked at that time to ſee *Sheridan's Pizarro* at Drury-Lane, we of courſe followed the multitude, and, with difficulty, procured acceſs. *Barrymore*, who filled

filled the character of Pizarro, was the beſt picture of a villain I ever witneſſed, and did ſtrict juſtice to his part. Upon the whole, what occurred to me, upon ſeeing this popular repreſentation, was, that a great deal of its ſucceſs was owing to the painter and tailor: indeed, the ſcenes and dreſſes were excellent. Rolla's famous ſpeech to the Peruvians ſavoured much of bombaſt and declamation: perhaps, the nature of the times has given a degree of currency to this and ſeveral other paſſages, which might otherwiſe have been received, without ſuch extraordinary marks of applauſe.

We obſerved, with much ſatisfaction, the great diſpatch uſed in the courts of law, which, if imitated in Scotland, would inevitably beggar three fourths of the profeſſion. In the Court of Common Pleas, during the ſhort ſpace of a ſingle hour, we ſaw a cauſe of conſiderable importance determined, and a freſh Jury put into the box. Every attention ſeemed to be paid to the buſineſs by the Judge (Sir Giles Rooke), by the Counſel on both ſides, and by the Jury. The ſeveral forms of opening the cauſe, examining five or ſix witneſſes, charging the Jury, &c. were gone through in leſs time, than would have been taken in ſome other Courts to determine upon the previous point, viz. the relevancy of the indictment.

It was our good fortune to be in London when the King inſpected or reviewed the volunteer corps, (any of theſe terms are equally applicable); and as ſuch a ſight in the city was novel and extraordinary, the public curioſity was awakened to the uttermoſt. The police, as uſual, took every ſtep to prevent diſorder; and the principal ſtreets through which his Majeſty was to paſs, were covered with ſand in the courſe of the preceding night, while barricadoes were erected at the different entrances, to prevent carriages from paſſing—a very neceſſary precaution. His Majeſty being to enter from the Surrey ſide, by Blackfriars Bridge, we went over early in the morning to Sir Aſhton Lever's muſuem, where, from a balcony, we had a full view of the Royal Family, and their attendants. I muſt premiſe, that the proceſſion came up at a *hard* gallop or canter, a detachment of the horſe-guards clearing the way; next followed the King, upon his white charger, with the Duke of York on his right, and Kent on his left, attended by a great number of general officers, while another detachment of horſe-guards cloſed this part of the proceſſion. Behind,

were

were a mixed multitude of all deſcriptions, whipping, ſpurring, and driving on at full ſpeed, without the leaſt order or regularity. In ſhort, I could compare this part of the proceſſion to nothing elſe than your holiday hempies, who ſcamper along the back-ſands at Leith races, during the interval between the heats.

At Blackfriars Bridge, the King was met in ſtate by the Lord Mayor, Sheriffs, and other officers of the municipality; but his Lordſhip's horſe was badly trained for facing ſuch a numerous aſſemblage. We followed as faſt on foot as we were able; but, as it was impoſſible to keep up with his Majeſty, we proceeded no farther in that direction than Leadenhall-ſtreet, which was filled with the Eaſt India volunteers. Learning that the chief exhibition would be in Finſbury-ſquare, we made the beſt of our way to that place, which was crowded with troops and a multitude of people, while the windows of every houſe were occupied by the female ſex. We forced our way up to the head of the ſquare, where the proceſſion was to enter; and, by getting hold of the baluſtrades, I had the fineſt view imaginable. Figure to yourſelf a vaſt body of troops drawn up in the ſquare; freſh bodies conſtantly marching along the ſtreet, while the ſcene was enlivened by numerous bands of martial muſic, and the loyal huzzas of an immenſe multitude. The weather, which, in the morning, was but lowering and dull, now changed for the better: the ſun ſhone bright, and a gentle breeze prevented the heat of the place from being diſagreeable. Under theſe favourable circumſtances, his Majeſty entered the ſquare, and was received with ſuch burſts of applauſe, as could not fail to animate his royal breaſt with the moſt delightful and grateful ſenſations. Thouſands of white handkerchiefs in an inſtant were waved from the windows, while the ſpectators below teſtified their heartfelt joy by repeated and general acclamations. The King immediately took off his hat, and bowed to the people; and, during his march round the ſquare, (which was conducted with great deliberation), was joined by the Prince of Wales, at the head of the Artillery-company of the city, who afterwards rode on his Majeſty's right hand: the proceſſion then went on to the Lord Chancellor's, where the Royal Family breakfaſted, inſtead of taking that refreſhment at the Bank, as was expected by the Directors. Satisfied with what we had ſeen, we returned to our lodgings.

His

His Majeſty appeared to great advantage upon this occaſion, as he is an excellent horſeman; and, what is more to his credit, the warm and grateful reception which he uniformly experienced, evidently affected him in a feeling manner. John Bull himſelf was highly delighted with the great honour of this viſit—an honour never beſtowed upon him by any of the preceding Sovereigns. It was curious to hear the converſation in the ſtreets: "What do you think," ſays a worthy citizen to his friend, "of the King's goodneſs? He abſolutely took off his hat to my Lord Mayor at Blackfriars Bridge." "Did he indeed!—Oh, he is a fine fellow—huzza!!!"

We underſtood, it was paſt five o'clock before the whole affair was over; and a fatiguing one it muſt have been to thoſe immediately concerned. Our friend —— of the St. Martin Le Grand volunteers, aſſured me next day he was quite exhauſted before they were diſmiſſed, having been upon the ground in Hyde Park from 8 o'clock A. M. without any refreſhment. The error lay in calling out the corps in the weſt end of the town ſo early; for a very ſmall degree of foreſight might have taught the commanders, that the previous proceſſion would conſume a good deal of time.

The buſineſs of the day has confirmed my opinion of the goodneſs of the London police; for I did not hear of a ſingle accident having happened; nor did the leaſt degree of confuſion prevail in the ſtreets, further than what might naturally be expected from ſuch a concourſe of people. The erecting of barricadoes was an excellent preventive, and the covering of the ſtreets with ſand, proved of much utility. In a word, the day paſſed over in the moſt agreeable manner; and, at the concluſion of the buſineſs, the multitude retired peaceably to their homes, without kicking up a duſt, as is commonly the caſe in a certain city upon public rejoicing days.

Let me now ſay a few words upon agricultural ſubjects.—I thought it but the leaſt I could do, to pay my reſpects to the noble Preſident of the Agricultural Board; and, to ſpeak in a court figure, was moſt graciouſly received. His Lordſhip, after talking a little upon general points, inquired if I was acquainted with the Kentiſh huſbandry (wheat and beans alternately), as he wiſhed much to have it generally introduced. I replied, that ſuch a ſyſtem undoubtedly deſerved ſerious attention upon the ſoils calculated for producing theſe grains; but that I had good cauſe to believe, that the ſtricteſt

care

care beſtowed upon the working of the land, could not prevent Summer fallow from being neceſſary, as the ſeed furrows, for both crops, were generally given at a period of the year, when the ground was not in the moſt favourable condition for receiving benefit; though I had not a doubt, but that, if the beans were ſufficiently cleaned, the line or courſe of crops might thereby be extended, providing the ground was duly manured. His Lordſhip then mentioned, that he thought, in the bean huſbandry, the intervals of the drills ſhould not exceed eighteen inches; and that a hand-hoe, invented by the celebrated Mr Ducket, which, in the hands of a woman, was capable of cleaning one acre per day, was the beſt inſtrument to be uſed. I remarked, that cleaning an acre per day by one hand, was an uncommon circumſtance; as three women would hardly, in that time, go over an acre of turnips, which were generally raiſed upon ſofter ſoils, and had received a greater extent of culture; and that, with ſubmiſſion, I was of opinion, if beans were meant to be raiſed upon the great ſcale, that no mode of working them was equal to the horſe-hoeing huſbandry, under which the buſineſs was performed at leſs expence, and in a completer ſtyle, than it was poſſible to execute upon loams and clays by hand-work. His Lordſhip referred me to the office for a ſight of Mr Ducket's hoe, which, he politely obſerved, would contribute to produce a change in my ſentiments.

His Lordſhip appeared to poſſeſs a good deal of information reſpecting practical huſbandry, and diſplayed a degree of keenneſs when diſcuſſing the different ſubjects which occupied our converſation.

I next went to the office, but was ſorry to learn that the bean-hoe was returned to Mr Ducket, for ſome neceſſary alterations; ſo my prepoſſeſſion in favour of the horſe-hoeing ſyſtem continues unremoved. The clerks very civilly ſhewed me the innumerable models of huſbandry implements belonging to the Board, which, if preſerved from deſtruction, will, in a couple of centuries, prove an immenſe gratification to the antiquarian.

I have been out at our friend —— in Hertfordſhire, who has a ſnug little box, and a ſmall property in that county. He keeps the latter entirely in graſs, which certainly ſaves him a deal of trouble; and I do not think profit ſeems to be his object. The Hertfordſhire plough, for ſtrength and ſize, exceeds every inſtrument in the kingdom for breaking up ground: our old Scotiſh plough is but a child, in compariſon with

with this giant. Five horſes are uſually employed in the draught; and yet, ſtrange to tell, the furrow we ſaw did not exceed four inches in deepneſs! I have ſeen land ploughed full deeper with one horſe.

I ſaw an excellent mode of putting up a hay ſtack, which, I think, deſerves to be generally known. I need hardly tell you, that they beſtow much more pains, in the vicinity of London, to win hay green, or in the ſap, than is cuſtomary with us; and they are right; for, by letting it remain uncut till the blade is hardened, or the moiſture nearly exhauſted, the value of the herbage is leſſened, and the land injured. To preſerve the juices, it is cut very early, perhaps a fortnight ſooner than we would think it ready for the ſcythe; it is put into ſmall cocks as faſt as poſſible, and ſtacked with all convenient ſpeed. The mode of ſtacking which I ſaw, was this.—Two large poſts were perpendicularly erected, at a diſtance from each other, equal to the length of the intended ſtack; a croſs beam was laid, ſtretching from the one poſt to the other, upon which a large ſail or canvas was hung, intended as a covering to the ſtack during the time of building; and the hay was brought in ſmall quantities, according to the ſtate of the weather, or the degree of winning it had received. By this means, whenever any part was got into condition for keeping, it was inſtantly ſecured, while the ſtack was preſerved from injury, by the cover or umbrella which hung above it. Another important circumſtance was, that very little treading was required, as the ſtack ſettled gradually, and by this means was not expoſed to an *over-ſweat*, which is highly deſtructive to all graſſes, particularly thoſe of the meadow or natural kind. In ſhort, this mode appeared to me one of the beſt that could be deviſed for winning and preſerving hay, in our variable and unſettled climate.

You may believe, that Smithfield and Marklane would engage my attention in a particular manner. Such a number of beaſts, ſheep, lambs, calves, and ſwine, were preſented in the former for ſale, that the firſt thought which occurred to the mind was, Where will people be found to eat you all? The market is conducted with ſurpriſing regularity; there not being one half of the confuſion uſually attendant upon our petty county fairs, where the fiftieth part of the buſineſs is not tranſacted. The beaſts are all tied up by the head to ſtrong rails, and arranged in a line according to their ſize, and, in many inſtances, according to their reſpective breeds; which facilitates buſineſs very much. The ſheep, &c. are

all

all encloſed in hurdles: in a word, the police of the market is managed with the greateſt judgment and regularity.

The corn exchange in Marklane is a buſy place, where almoſt as much noiſe prevails as in your Outer Parliament Houſe. This is a ſample market, where the grain is ſhown in ſmall bags, about a peck each, placed upon tables, for the inſpection of purchaſers; but the fact is, the place is too ſmall for ſuch extenſive dealings.—Many of the ſamples that I examined, were of inferior quality, and far from being well dreſſed, particularly thoſe of wheat and oats, the laſt of which were generally exceptionable. The beans were of excellent quality, much ſurpaſſing any we have in Scotland, which I attributed to their being raiſed and harveſted under the influence of a hotter ſun.

It is ſurpriſing how adroitly the horſes are managed in the large drays, and other carriages uſed in the ſtreets of London, without a hand being laid to the rein, but all executed under the influence of the whip and the voice. No fewer than four powerful horſes are ever yoked in a team; and they all go in a line with wonderful ſteadineſs. I have ſeen them take a turn into a narrow lane, where the carriage had ſcarcely room to move, without more pains being uſed by the driver, than would have been required with one of our ſingle-horſe carts.

It is unneceſſary to trouble you with a deſcription of St Paul's Cathedral, the Tower, and other public places which we viſited, as theſe ſubjects only afford a repetition of what has been ſaid a hundred times before. The wharfs are ill calculated for carrying on the trade of the emporium of the world, being little better than large back doors into the warehouſes where goods are depoſited. We heard with ſatisfaction, that ſeveral plans were in contemplation, for rectifying theſe defective accommodations, which, like every other mode of improvement in this country, has been ſelfiſhly oppoſed.

We are juſt going to ſet out upon our homeward route, which we take through Eſſex, Suffolk, Norfolk, &c. As theſe eaſtern counties are ſeldom viſited by Scotiſh travellers, I hope ſomething at leaſt new will occur in our progreſs, which, if it does not add to your ſtock of knowledge, may contribute to your gratification and amuſement. I am, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Flax Husbandry.

GENTLEMEN,

THE culture of Flax is such an important branch of the rural economy of Britain, that I can hardly help expressing my surprise at its being hitherto so much neglected. It is evident, that a considerable proportion of our soil is naturally well calculated for the production of this article, which is the foundation of one of our first and most valuable manufactures: and it is truly wonderful, while immense sums have been annually, for a great space of time, transmitted to the Continent, for the purchase of a commodity which cannot be wanted, that we should not arrange our own economy in such a way, as to produce a quantity necessary for supplying the home manufacture. This surprise will be augmented, when it is considered, that facts fully ascertain, that seed of a proper quality can not only be raised upon our own fields, but also, that flax, of sufficient strength and fineness for every branch of the linen manufacture, may be produced; which, consequently, if the different processes of management were properly attended to, could not fail to be succeeded by the most important national advantages.

I am aware, that the generality of farmers look upon flax as a robber, and, consequently, consider its growth as injurious to British agriculture. I humbly believe, that, in one respect, the opinion generally entertained will not be supported by facts; for, if flax is pulled at a proper period, that is, when the seed has not arrived at maturity, it is not severer to the ground than any of those classed under the head of leguminous crops, and less so than a white crop of corn. I acknowledge, that a field under flax gives no return of dung to the farmer for that year; but still, under this acknowledgment, the culture of the article is not more deteriorating than where hay is raised, without being consumed on the premises. After all, so much of our meadow and richest lands may be employed in producing flax, without any perceptible diminution of the quantity of dung required for the arable fields, that I can be under no difficulty in maintaining, that a quantity sufficient for supplying the consumption of the country, may be raised at home, without affecting

affecting the value of the soil, or lessening its productive powers.

It may be argued against this, that the experiment has already been tried, and that, even with the aid of public bounties, the cultivation of flax has not arrived at perfection, nor has the quantity increased much for a great number of years. I acknowledge the force of these objections; but am not so ready to yield the principal point, viz. that our lands are not capable of producing what is requisite for supplying our own manufactures; and that the growth of the article may be extended with advantage to the farmer, without hurting his fields in a perceptible manner. If these things be conceded, I humbly apprehend, that the want of success hitherto, must be attributed to a defect in the general management, and to several prejudices which have operated against the extension of this branch of rural economy.

I am happy to notice my sentiments respecting the value of British flax, fully corroborated by the writer of a letter herewith transmitted to you; and, I believe, his remarks upon the subject are applicable to the practice of nine tenths of Britain, so far as concerns the culture, growth, and after management of flax. An appendix is also sent you, which shows the great national advantages attending the growth of this article. These papers were received from Sir John Sinclair, Baronet, to whom Britain lies under innumerable obligations.

One thing more, and I am done. If, at any period of our history, the raising of flax was deemed of importance to Britain, it now deserves a greater degree of attention than ever, for these reasons:

1. On account of the increase of our manufactures, which require a greater supply.

2. On account of the uncertainty of procuring the usual supplies from foreign countries.

3. On account of the promising appearances of the flax-mills for spinning, which are brought to such perfection as to admit a greater extension of the linen manufacture, consequently will require a great deal more of the raw article; and British flax is the best adapted for mills, of any I have seen. I am, &c.

Your, &c. N.

Extract of a Letter from a Linen Manufacturer, to Sir JOHN SINCLAIR, *Bart.*

Dated May 11. 1795.

SIR,—Were an apology neceſſary for the trouble this may occaſion, I ſhould be much at a loſs how to make one, that could be accounted proper; but as there can be no offence in communicating a few hints, reſpecting the improvement of any production of the earth, more eſpecially thoſe of our native ſoil, I forbear offering any apology for the liberty now taken.

Nor can I ſuppoſe the conveyance of ſuch hints, confirmed by practical experience, will be the leſs acceptable for being expreſſed in language familiar to thoſe who are bred to cultivate the ſoil, whoſe ideas and converſation, like their daily labour, have nothing to recommend it but ſimplicity and antiquity; for, in every other reſpect, their ideas and converſation are, in general, the leaſt improved of any deſcription of men in the empire, and to theſe they adhere with as much obſtinacy as they do to their antiquated cuſtomary modes of cultivation. In no part of culture, this is, or can be more conſpicuous than in that of hemp and flax, which, in the courſe of more than a century, has not received any viſible improvement, although they are every year becoming more important, as materials for numerous and various branches of our manufactures.

In the north-eaſt part of the county of Cumberland, where I reſided for ſeveral years, and was concerned in carrying on a branch of the linen manufacture, I endeavoured much to introduce a different mode of proceſs in the growth of flax, and every part of the proceſs it muſt neceſſarily go through before its being fit for the heckle. For this purpoſe, for ſeveral years, I had from three to five acres under flax. My principal intention was, to ſhow a ſuperior attention in the choice of the ground, in the preparation previous to its receiving the ſeed, in the weeding of the flax when growing, in pulling it at a proper time, preſerving the ſeed, watering the flax, ſpreading it to whiten the bark or ſkin, for drying and breaking the bone or ſtem, and ſeparating the ſhoves from the flax, &c.; all of which were the direct reverſe of the common modes in uſe, and which I endeavoured to render as conſpicuous as poſſible, in order to encourage, by example, a deviation from the cuſtomary proceſſes in uſe. But, for upwards of nine years, neither example, nor the experience of the good

good effects which my management had in that time produced, were ſufficient to gain any imitators in the neighbourhood.

As I managed the dreſſing of the flax and ſpinning of the yarn for the manufactory in which I was concerned among them, I took every occaſion to converſe with, and ſhow the ſpinners the difference betwixt the foreign flax we uſed, and what I grew, in reſpect of ſtrength and other advantages, with reſpect to the durability of cloth made from my production, and that made from foreign flax; and they were, from their own experience, convinced of the ſuperiority of the foreign flax to what they produced on their own land; and every farmer, as well as cottager, cultivated more or leſs every year.

They had hitherto been under the neceſſity of purchaſing ſome foreign flax, in addition to what was produced from their own growth; and at length they were ſo well convinced of the ſuperior properties of mine, that they would purchaſe no other when I had any to ſell. I had at laſt the ſame ſucceſs with the ſale of my ſeed, although, at firſt, ſo far were they from purchaſing it, that they would not even accept the gift of it; only thoſe who could not afford to pay from 3d. to 4d. a pound for foreign ſeed, on them I prevailed to accept of ſome; and, by inſtructing them how to uſe it, I at laſt ſucceeded ſo far, that no other ſeed could be ſold at market while I had any to diſpoſe of. My proceſs then began to gain ground alſo among thoſe who could afford to make the experiment.

Yet it is with me a matter of doubt, if there remains in that part of the county any veſtige of it. Although I had annually as much ſeed as was neceſſary for next year's ſowing, and ſold as much, after the quality was perfectly underſtood, as paid land rent, and every expence till the flax was put in the water; yet, owing to the want of experience in thoſe I was obliged to employ in the ſubſequent ſteps, and their intractability, my flax came to the heckle as dear as the foreign flax did. My only advantages were in the ſuperior quality both of flax and ſeed, and having experimental proof, that, under proper cultivation, we might in a few years produce flax nearly ſufficient for the ſupply of our linen manufactures, and ſeed for ſowing, for oil, and great quantities for exportation, and both of a much ſuperior quality to what we uſually import, eſpecially the ſeed.

Upon peruſal of this, ſhould it appear to merit your notice, and you condeſcend to ſignify a wiſh for a more detail-

ed account of my method, I will think myſelf honoured by your commands, and will, by letters or perſonal attendance, at your option, explain, in the minuteſt manner, to the beſt of my ſlender abilities, the whole proceſs, from the ſeed to the loom.

I conclude, as I began, without any apology, and with ſubſcribing myſelf, Sir, Your obedient humble Servant.

P. S.—I was in my youth bred to the linen manufacture, and, in maturer years, carried on the manufacture of different articles in that branch on my own account.—To make the raiſing of flax an univerſal or national purſuit, it will be neceſſary to give pecuniary encouragements; not in ſuch manner as has been done, for the largeſt quantity raiſed by one perſon in one year: this is an oſtenſible, but not a real or well applied encouragement; nor will it ever promote any real national advantage. Some perſons of fortune may, for applauſe, ſow a quantity, for the purpoſe of gaining the premium for that year only, as the premium is given on the quantity grown, but not for preparing it for uſe; while, perhaps, neither ſeed nor real flax is produced by the attempt. The premium, therefore, ſhould only be given for flax and ſeed fit for the manufacturer, and proportioned to the quantity and quality ſo produced; to be continued annually for a certain number of years; or (ſhould the expence not be deemed too great) till the practice become general. Let the bounty on linen cloth be withdrawn, and applied to this more neceſſary and beneficial purſuit; as ſuch bounties never are of any uſe to our manufacturers, but are a conſiderable expence to the public.

None but the countries who at preſent ſupply us with hemp and flax, are in the leaſt benefited by this well meant, but ill judged bounty; for, ſo long as they know we muſt apply to them for theſe materials, they will add to the price of the articles as much every year, as will more than counterbalance the end for which ſuch bounties are given; and, by the advance on the price to our manufacturers, they will ſtill be capable to underſell us, both in foreign markets and our own, in the ſame manner as if theſe bounties had never been given. But, the inſtant they find we give premiums for the home production of theſe materials, they will lower the price and duties paid upon them, in order to prevent a rivalſhip which would materially injure them, and benefit ourſelves.

AN

AN APPENDIX, shewing the great National Advantages, by the Employment of a number of People, during the Autumn and Winter Quarters, and other parts of the Year, which the Encouragement of the Growth of FLAX will produce, with the number of People One Acre will employ.

Average Expences of One Acre of Flax.

	£.	s.	d.
Rent of the land	1	5	0
Ploughing, sowing, &c.	0	10	6
1½ bushel seed	0	18	0
Weeding	0	4	0
Pulling	0	3	0
Carriage, and getting in the harvest	0	15	0
Tithes	0	5	0
Poors rates, highways, &c.	0	5	0
Thrashing	0	14	0
Watering, carriage, and spreading	0	10	0
Braking and swingling	1	14	0
L.	7	3	6
Deduct			
The value of 12 bushels of seed, which is frequently sold to the oil mill, for the making of lintseed oil	4	4	0
L.	2	19	6

Stones of Flax 14 lb. Weight. Average produce.

	£.	s.	d.
30 stone flax, at 5s. 8d.	8	5	0
Deduct			
Expences on growth as above	2	19	6
L.	5	5	6

Produce of Flax from the 30 Stones. *Value per lb.*

	lbs.	d.	£.	s.	d.
Of flax	90 at	10	3	15	0
Ditto	170	8	5	13	4
Short flax	40	6	1	0	0
Clearings	30	5	0	12	6
Hurds	60	2½	0	12	6
Waste	30	..	..	..	..
		L.	11	13	4
Deduct					
Heckling	1	0	0		
Value of flax brought down	8	5	0		
			9	5	0
		L.	2	8	4

APPENDIX CONTINUED.

Produce of the Acre in Yarn.	*Each Lea of Yarn is 800 Yards.*	*Value per lb.*					*Produce of the Flax in Cloth.*	*Value per Ell.*				
		lbs.	*d.*	*£.*	*s.*	*d.*		*ells.*	*d.*	*£.*	*s.*	*d.*
Of Linen yarn, 10 Lea	- -	40 at	20	7	10	0	Of cloth - - - -	145 at	19	11	9	7
Ditto - -	- -	170	16	11	6	8	Brown - - -	197	17	13	18	10
Ditto - 6 Lea	- -	40	12	2	0	0		45	14	2	12	6
		30	6	1	2	6		28	13	1	10	4
		60	4½	1	2	6		45	11	2	1	3
				L. 23	1	8				L. 31	12	6
Deduct							Deduct					
Spinning the different yarns	L. 11 8 4						Weaving, winding, warping, bucking	L. 8 7 2				
Working the flax brought up	9 5 0						Expences brought forward -	20 13 4				
				20	13	4				29	0	6
				L. 2	8	4				L. 2	12	0

N. B. The manufacturing part of the produce will employ 15 perſons full three months, the different works being thrown on an average.

The above ſtatement will be ſubject to great variations, according to the difference of crops.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Floating of Land.

GENTLEMEN,

AMONGST the many pertinent and ſenſible remarks in your review of Mr Middleton's Survey of Middleſex, I was ſurpriſed to find that the reviewer ſhould think Mr Middleton ſpeaks in rather too high terms on the ſubject of irrigation, when he ſtates, 'that forty acres of good water-meadow will ſupport, in the greateſt luxuriance, 500 Wiltſhire ewes and lambs for ſix weeks, from the middle of March to the firſt of May.' On this quotation from Mr Middleton, the reviewer obſerves, 'that it exceeds any thing he has met with reſpecting the produce of graſs land; for it is only the beſt meadow that will feed five ewes and lambs per acre, from the middle of March to the firſt of May; and the greateſt part of the paſtures in the kingdom will not ſupport near ſo many.'

As the produce of watered meadows certainly very far exceeds the produce of the beſt paſture land, or the beſt *unwatered meadow* in the kingdom; and as the floating or watering of land is one of the greateſt improvements that can be introduced into any country, when the rearing or feeding of ſtock is an object; I would beg leave to point out to the attention of the reviewer, the following ſtatements of the produce of watered meadows by different authors.

Mr Davies, in his Agricultural Survey of Wiltſhire, on the ſubject of Watered Meadows, ſtates, 'that *one* acre of good meadow will ſupport 500 Wiltſhire ewes and lambs for one day;' conſequently, forty acres will ſupport the above ſtock for forty days, which is only two days leſs than in the ſtatement given by Mr Middleton.

Mr Wright, in the ſecond edition of his treatiſe on Watered Meadows, gives the following inſtance of the produce of a meadow in the neighbourhood of Cirenceſter. 'It was one which had been watered longer than the oldeſt perſon in the pariſh could remember, but was by no means the beſt meadow upon the ſtream, nor was the preceding Winter favourable for watering. It contains ſix acres and a half. The Spring food was let for ſeven guineas, and well ſup-

ported near 206 ſheep, from the firſt of March till the beginning of May; the hay was ſold at thirty-two guineas, and the aftermath for ſix guineas. A meadow of ſeven acres, the whole crop of hay on which had been ſold for 2l. before it was watered, has, ever ſince it has been laid out as a watered meadow, been let at the annual rent of 3l. per acre.'

In Mr Wright's third edition, is the following account of the product of a meadow:

'In order to make the moſt of the Spring food, the proprietor kept the graſs untouched till the 2d day of April; from which time he let it to the neighbouring farmers, to be eaten off in five weeks, by the under mentioned ſtock, at the following rates per head: A ſheep, 10d. per week; a cow, 3s. 6d.; a colt, 4s. The quantity of land is eight acres.

107 wedder ſheep,	one week	L.	4	9	2
8 cows,	ditto -		1	8	0
4 colts,	ditto -		0	16	0
		L.	6	13	2
					5 weeks.
Total of 5 weeks		L.	33	5	10
3 colts, 3 weeks, to be added			1	16	0
		L.	35	1	10 or 4l. 7s. $8\frac{9}{11}$d. per acre.

After being fed as above, the hay crop was, as uſual, about fifteen tons, and was ſix weeks in growing.'

Since ſuch are the immenſe advantages to be derived from the floating of land, and that, wherever there is a conſiderable ſtream of water, many acres may be thus highly improved, I think extracts from the treatiſes of Mr Wright, on the art of floating land, and from Mr Davies's account of the art, in his Survey of Wiltſhire, might be introduced with great propriety into your valuable Magazine.

Yours, &c. S. E.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Observations on Expences of Farming; on Manorial Claims; and on Improvement of Entailed Estates, &c.

GENTLEMEN,

I HAVE perused the first Number of the Farmer's Magazine, with much satisfaction. The Introduction is a masterly composition; so are many of the communications.

The spirit of investigation, this publication may raise, cannot be disagreeable to the publishers; it could therefore have been wished, in place of *the annual charge attending a plough and two horses*, they had mentioned the quantity of land, of a particular kind, these might labour, the expence, and the produce, that one might see what profit should reasonably be expected. As it stands, this is only part of an account; and most of the articles may be said to be paid by the farm itself, or furnished by it, which amounts to the same thing *.

There is another thing may probably appear very simple to many of your readers, the want of knowledge of which, has, last year, caused a good deal of loss, viz. *the best mode of preserving apples through Winter*. This, the people who deal in large quantities must certainly know: an account of it would be agreeable to many of your readers.

As to *manorial claims*, I am afraid your correspondent has only looked at one side of the picture; and as he admits he has not gone to the origin of them, his hints must be defective: He does not even seem to look forward with much penetration. As to the *game*; admitting, for the sake of discussion, that all the game-laws hitherto enacted in favour of proprietors,

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Remark by one of the Conductors.

* If the account presented, p. 46, be correct, (and we believe it is near the truth), what is said above, by our respectable correspondent, is rather out of place. The *Rural Economist* professed to give no more than the annual charge of a plough and two horses, and his statement includes every article: so cannot, with the least propriety, be considered as "*only part of an account.*" That several of the charges are for articles furnished out of the farm produce, is no objection; for, if not consumed in this manner, they would have just drawn as much money at market. It might, with equal truth, have been alleged, that a farmer pays nothing for his farm, when the rent is delivered *in kind*.

N.

proprietors, were aboliſhed; and that a new legion of Nimrods were created in the farmers and their ſons; and that this noways abated their induſtry in farming:—How could the proprietor, who was a ſportſman, be prevented from conditioning with his tenant, that he reſerved the game to himſelf, or to ſuch other gentlemen as might have leave in writing from him? This, every landlord would immediately do, and with more reaſon than excluding aſſignees and ſubtenants; for, though power were granted both to aſſign and ſubſet, ſtill would the principal tenant be liable to pay the rent. With regard to *copy-holds*, theſe are analogous to our *feu-holdings*. Now, as to theſe, the lord of the manor, having been the proprietor, had aſſuredly a right to grant theſe (which are neither more nor leſs than perpetual leaſes) on any conditions he choſe. The fines on the entry of heirs, are therefore equal to fines on renewal of leaſes to ſons of tenants. *Millſokes* or *multures:* When the lands are ſold with this burden, they ſell ſo much cheaper: when the lands on which the mill ſtands change maſters, a greater value is given on that account. *Waſtes* muſt be divided according to the value of the intereſts of thoſe who have right. *Minerals* are accounted for, in being claimed by the lord of the manor, from his reſerved right of property. If, indeed, the Legiſlature ſhould judge it beneficial, to cauſe all or any of theſe claims to be valued at certain rates, and ordain the lord of the manor to ſell, and the copy-holder or feuar to buy, it is uncertain if this would give much ſatisfaction; and to give an option to the latter, would not be embraced. Witneſs the few rights of patronage purchaſed by the pariſhes, in the beginning of this century, on a ſimilar option. Neither would a rent-charge, or additional feu-duty, in place of theſe, where neither of the parties inclined to purchaſe, pleaſe much better. And periſh the pretended reform, that would rob any honeſt man of his right, by taking it from him without a compenſation! *

To

* While we applaud the ſpirit of the above exclamation, we muſt remark, that the advancement of the public good renders it neceſſary, upon many occaſions, to ſacrifice the intereſt of individuals. If Henry VIII. and the Lords of the Congregation, had acted according to our correſpondent's principles, the Reformation would not have been introduced into theſe kingdoms; nor would the glorious Revolution of 1688 have taken place. The fact is, that every law for improvement, injures ſome individual or other; which might be exemplified by innumerable inſtances of legiſlative interference, was the point in the leaſt degree queſtionable. N.

To ſhow the reader, that the writer of theſe ſheets is no enemy to the improvement of the country, or to an amendment of the laws for that purpoſe, he begs leave to ſuggeſt the following conſiderations as to *entails*. The power allowed to heirs of entail to ſell, for the purpoſe of redeeming the land-tax, was highly proper. Had it been extended to all the public taxes, there would have been no harm; could a plan be contrived, by which it were certain the money would be applied to that end. To allow them to borrow a ſum ſufficient to purchaſe an annuity equal to theſe, on giving proper ſecurity to the clerk of entails, that the annuity was to be ſo applied, would poſſibly anſwer the end; or to borrow a ſum, which, lodged with their banker, the intereſt ſhould be adequate to the purpoſe, ſecurity always being given for the proper application, as above: for, although the entail might provide againſt the extravagance or facility of the heir, he muſt have been ſubject to the taxes, had he been able to perpetuate his life, as well as his eſtate; as he could have had no right to lock up his funds from the ſervice of the public, to which he muſt have contributed, if alive. In fact, the ſtatute for the improvement of lands under ſettlements of ſtrict entail, has not been found to anſwer the end; becauſe it required the heir of entail to lay out the money, in the firſt place, which he generally cannot afford to advance; and, being little other than a liferenter, cannot borrow, as few creditors chooſe to lend on aſſignment to his claim againſt the next heir. To allow him to borrow, on a petition to the Court of Seſſion, with a ſpecific plan and eſtimate of the intended improvements, and intimation of the petition to the next heir, and on caution to the ſatisfaction of the clerk to the regiſter of tailzies, would tend more to the improvement of the eſtates, and be perfectly ſafe, if there were a ſtatute obtained to authoriſe the meaſure. And this clauſe, of caution to the ſatisfaction of the clerks in office, is perfectly cuſtomary in Scotland, in judicial ſales, in removings, &c. &c.

Wiſhing your publication all manner of ſucceſs, I am,

Your moſt obedient ſervant,

MILONIDES.

FOR

FOR THE FARMER'S MAGAZINE.

Short View of Agriculture in Ruſſia *.

In the vaſt extent of territory now included in the Ruſſian dominions, the people who have, from time immemorial, attached themſelves to agriculture, (however rude, and with whatever ſucceſs), are the *Ruſſians*, properly ſo called, the *Poles*, the *Lithuanians*, the *Lettes*, the *Finns*, and the *Eſthonians*, who dwell conterminous to one another, in the N. W. quarter of this great empire. As the firſt of theſe, however, compoſe the chief and moſt numerous claſs, the following particulars muſt be underſtood as principally confined to them, with this preliminary obſervation, that in the whole ſtretch, from eaſt to weſt of the Ruſſian territory, there is hardly any part ſuſceptible of cultivation, beyond the 60th degree of north latitude, and even to this extent only in the weſtern parts, as the frigid region extends farther and farther ſouth, the more eaſterly we go, till, at the point of Kamtſchatka, on the ſhore of the American Ocean, cultivation is impracticable beyond the 51ſt degree; thus, leaving a tract of about 160,000 ſquare miles bound up in eternal ſterility, froſt and ſnow.

The chief implement of Ruſſian agriculture, is the *fork* or *hook-plough*, deſcribed as having two ploughſhares faſtened to a forked board, and is uſually drawn by one horſe, or by two oxen; and is held by a lad of fifteen, who drives at the ſame time, but making a furrow of only $1\frac{1}{4}$ inch deep. This is uſed generally on lands that are in conſtant tillage; but when new grounds are broken up, what is called the *knife-plough* is employed, and which, after all, goes only about half as deep again. At other times, it ſhould appear, that the land, in this caſe, is ploughed twice, firſt with the knife-plough, cutting the turf into ſlices, and then with the fork-plough, at which time the ploughman muſt turn the furrow over, as it riſes, with his foot; from which it may be inferred, that this ſimple implement does not poſſeſs that power of itſelf, but does probably operate in a ſimilar manner to the *ſcrape-plough* in Britain (drawn alſo by one horſe), which is ſometimes

* This is collected from the 3d Vol. of *Tooke's View of the Ruſſian Empire*, lately publiſhed. A work of great merit, and abounding ſo much in matter well choſen, and ſo well arranged, as almoſt to preclude abridgement.

ſometimes uſed in cutting up the weeds in the intervals of drilled crops. The harrow is ſtill more ſimple than the plough, being compoſed entirely without iron, and in many places without even wooden pins; it being the practice, in ſome provinces, to conſtruct it with branches of trees rudely interwoven together. The *roller* is hardly known at all. The Finns never uſe any other but the branch-harrow, and frequently the *rake* inſtead of a plough.

One ſhould imagine, from this ſuperficial mode of tillage, that the crops would turn out very defective. This, however, is by no means the caſe; for, ſo rich is the ſoil by nature, that an ordinary crop of rye is from eight to ten fold, barley twelve, oats twenty, and wheat almoſt never below ſix.

In Finnland, the *beſt* mode of carriage is a two-wheeled ſmall cart; the wheels unſhod with iron; but more commonly two poles faſtened at one end to the ſides of the ſaddle, and the other ends trailing on the ground. The Ruſs, however, have their wheels ſhod with iron, and many examples of four-wheeled carts.

The *reaping* inſtruments are various. The ſickle, the common ſcythe, and the great German ſcythe. The Lette cuts his crop with a little ſcythe, fixed to a ſhort handle, which he holds in his right hand, having in his left a ſmall hook, with which he collects as much of the corn as he intends to cut at once. The Tartars uſe ſhort, but very arched ſcythes, on a ſhort handle; and, ſtanding upright, they cut both to right and left. The corn, after it is bound up, is ſet on end in circles of ten ſheaves, leaning againſt each other, and covered with one inverted at top.

Wheat and rye are ſown from the 1ſt of Auguſt to the end of September; and as the Spring is late of commencing, the Spring crops are not ſown till about the beginning of May. Harveſt is in July and Auguſt. From this, it may be conceived how rapidly vegetation comes on. In fact, the Spring ſeaſon in Ruſſia can hardly be ſaid to exiſt; as, from the ſtern rigour of Winter cold, the weather burſts forth, at once, into all the fervency of the heat of Summer.

Potatoes, ſo general in the North of Europe, are not cultivated by the native Ruſs at all, except only in the government of Archangel, in 63 degrees of latitude, where no kind of corn comes to maturity; yet here potatoes thrive wonderfully, producing from thirty to fifty fold.

In the northerly provinces, the corn is kiln-dried in the ſtraw (by the author improperly called *malting*); the thraſhing

of

of corn, over all, is by the common flail; in ſome places, by the ſtill more rude method of *treading* it out with men, or with horſes, and this on the ice as well as the barn floor.

It does not appear, that artificial graſſes, of any kind, are ſown; but nature, in ſome ſort, precludes the neceſſity, by the immenſe product of the meadow hay.

Rotation of crop, in the view of melioration, appears alſo to be unknown. The crop is indeed changed from one kind of corn to another; but the *green* crops, or thoſe which fertilize the ſoil, bear no proportion to the *white*, or thoſe which tend to ſterility; yet ſo bountiful is nature in defiance of this treatment, that, in the words of the intelligent author, "there is no country in Europe, where agriculture is conducted with ſuch negligence, and yet yields ſo great a return."

In the management of cattle, the Ruſs is perhaps not behind moſt of the European nations: with regard to numbers, he is better provided than any. Almoſt every peaſant has his horſe, beſides other cattle. The very beggars have their milch cow. The number of live ſtock poſſeſſed by ſome rich individuals, among the Tartaric nations in the ſouthern quarter of this empire, is almoſt beyond belief. Fifty thouſand ſheep are ſtated as belonging to one perſon. Another has 10,000 horſes, 300 camels, 3500 black cattle, 20,000 ſheep, and 1000 goats. The patriarch Job would not have been reckoned the greateſt man of the Eaſt, in this country.

Beſides all ſorts of cattle common to the reſt of Europe, there are ſome which ſeem peculiar to the Ruſſian empire. Thus, the *Dſhiggetei* and the *Khulan*, not aſcertained whether they belong more to equine or to the aſſine ſpecies, are met with in vaſt droves, in the foreſts to the northward of the Caſpian. Nothing can exceed them in ſwiftneſs, nor in their fierce and untameable diſpoſition. There is likewiſe a beautiful race of wild horſes, of a bay colour, in the wilds of the Ukraine, that hardly yield to the foregoing in any of the above qualities. Camels are native in the ſouthern provinces, as likewiſe buffaloes, both ſubjected to the rule of man. In the north, the rein deer of Lapland are trained to the yoke of the Ruſs; while in the eaſt, by Kamtſchatka, dogs are applied to the ſame purpoſe. To conclude, *The View of the Ruſſian Empire*, by Tooke, from whence the above ſhort notes are ſelected, is a work that cannot fail to be intereſting to readers

ers of almoſt every deſcription; and, in particular, to the amateurs of Agriculture and Rural Affairs *.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Quality of Rye-Graſs Seed.

GENTLEMEN,

I was highly pleaſed with the obſervations given in your laſt, reſpecting *the management of hay*, from which, in my humble opinion, much benefit may be derived. It would have given me additional pleaſure, had the well-informed author of that paper communicated his ſentiments, concerning the *kinds*, *qualities*, and *quantities* of ſeed, proper to be ſown for producing a full crop of that neceſſary article; as I believe, upon theſe points, the public in general are much at a loſs. In this country, agriculturiſts are nearly at one, that red clover and rye-graſs afford the greateſt return; while, in our ſiſter country, very different notions are entertained. Taking it, however, for granted, that red clover and rye-graſs are beſt calculated for producing a full crop of hay, I beg leave to inquire, in what manner the kind or quality of the rye-graſs is to be aſcertained? It is notorious, that an annual kind of rye-graſs is lately introduced, which has been attended by heavy loſſes to the farmers who have ſown down land, with a view of allowing it to remain in paſture for two or more years; and I am alſo inclined to think, that many noxious weeds, both of annual and perennial ſoils, are now generally mixed amongſt the greateſt part of rye-graſs. It is evident, that, ſince graſs ſeeds have been ſown in quantities in this country, a vaſt increaſe of that deſtructive and pernicious weed, provincially called *knot-graſs*, or *ſwine-arnol*, has taken place; and that, upon a great many ſoils, it is ſcarcely poſſible, with every degree of pains, to extirpate it. I have noticed fields very completely fallowed, when ſown

* We do not mean, however, from this, to give an unqualified approbation to this work. The author has allowed himſelf, in ſome inſtances, without reflection, to adopt very ill-founded opinions from others. For example, what he ſtates of Sweden, having a population of 220 to the ſquare mile, and European Ruſſia upwards of 400, is beyond all bounds extravagant. N.

ſown with ſeeds among the firſt crop, and taken up after lying only one year, to have been quite filled with this baneful plant or weed; which was a circumſtance hardly to be expected, unleſs the ſeed had been mixed among the rye-graſs. Some old farmers inform me, that very little of it was to be ſeen till within theſe fifty years, or ſince the ſowing of graſs ſeeds became general, which is the more remarkable, as the practice of huſbandry has, out of all doubt, received much improvement during that period. It appears, therefore, to me an important object, that the farmer ſhould be provided with rye-graſs of a right kind and quality: and, to attain this, I know of no better method, than that every farmer ſhould raiſe his own ſeed, which I moſt earneſtly recommend.

Yours, &c.

A RURAL ECONOMIST.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

GOOD roads are ſo neceſſary to the improvement of the country, that few objects are ſo intereſting to thoſe who are concerned in its welfare. Till roads are made good, and the communication between different places be rendered eaſy and commodious, it is ſcarcely poſſible that any capital improvement can take place. An unneceſſary waſte of labour, to a great extent, is the unavoidable conſequence of bad or inconvenient roads; and perhaps this waſte or loſs, if it could in any degree be accurately computed, amounts, in Britain, to a greater ſum *per annum*, than would be required to put the whole public roads at once into a complete ſtate of repair.

This ſubject has occurred to my mind, from having lately had occaſion to travel the *new* or middle road from your city to Glaſgow, which certainly has been laid out and conſtructed upon more ſcientific principles than any other road in this iſland. There is hardly ſuch a thing as a ſingle riſe in the whole line of road; at leaſt, any variation from the level, has been executed in ſuch a judicious manner, as ſcarcely to be perceptible to the eye, or to incommode the traveller in his paſſage. In a word, the gentlemen who undertook ſuch an important work deſerve well of the public, by thus providing a communication betwixt two great cities, whereon a ſingle horſe is capable of drawing a heavy load with greater facility

facility than is practicable, upon many other great roads, with a double number.

I beg leave to notice, that ſome parts of the road, where embankings have been neceſſary, are not provided with a wall or row of poſts, for the ſecurity of travellers, which will be a dangerous neglect in Winter nights, or during a ſnow ſtorm. This occurs particularly at two places to the weſtward of *Airdrie*, and ought to be inſtantly remedied.

Excellent houſes for the accommodation of travellers, are likewiſe provided at every ſtage; and, if the adjoining ſoil, the capital ſtock of the inhabitants, was of a ſuperior quality, this road might be travelled over with pleaſure and delight, in every reſpect.

Yours, &c.

A TRAVELLER.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

THE diſtreſſes ariſing from the ſcarcity of fodder having been ſeverely felt throughout the whole of Britain during the late uncommon ſeaſon, eſpecially in the hilly and upland diſtricts, I take the liberty (through the medium of your Magazine) of offering ſome hints, which, if properly taken up, may have a tendency to leſſen the evil in future.

The moſt prominent feature of the Highland huſbandry, next to the almoſt total inattention to the breed of their ſheep and cattle, is the improvidence and want of care in ſecuring a proper ſupply of Winter ſuſtenance for them; a neglect the more to blamed, as it is fully in their power to procure a ſufficiency with little trouble, and almoſt without expence. In theſe elevated ſituations, abundance of herbage of a nutritive quality is produced, upon which the animals not only live, but fatten, during Summer, and which, when the Winters are mild, continues to ſupport them in health and vigour during that inclement ſeaſon. In years ſo calamitous as the laſt, however, the caſe is ſomewhat different. A continued ſeries of cold wet weather during the Spring, Summer, and Autumn, killed many ſheep and lambs early in the year, and

prevented thoſe that ſurvived from acquiring fleſh or ſtrength at the proper ſeaſon: In that debilitated ſtate, they encountered one of the ſevereſt Winters ever remembered; an evil that was greatly aggravated by the heavy fall of ſnow at its commencement, which in many places entirely deprived them of food. The conſequences are but too well known. Great numbers periſhed in the firſt inſtance; and, of thoſe that reached the Spring, many have died from weakneſs alone. This, however, has not generally been the caſe; as, upon almoſt every farm where a ſufficiency of hay and other articles of a good quality were laid up, the ſtock has been kept in tolerable condition during the Winter, and reached the Spring nearly in the uſual way.

The evils ariſing from the want of a proper proviſion for the ſtock upon Highland farms, during Winter, has long been obſerved and lamented by intelligent men; and many attempts have been made, both by patriotic individuals and public ſocieties, to leſſen them. Amongſt theſe, the labours of the Highland Society hold a diſtinguiſhed place, and will long be remembered by the country at large with gratitude and pleaſure. The encouragement held out to Highland farmers, for the purpoſe of enabling them to ſow broad clover, and cultivate turnips and other green crops, has already produced very beneficial effects; and, if carried to the extent of which the ſyſtem is capable, will, in many diſtricts, not only prevent the evils ariſing from bad Winters, but produce additional benefit, by enabling the farmers to keep their young ſtock in a growing ſtate throughout the whole year; a matter of much more importance than is generally imagined; as both ſheep and cattle, ſo treated, make more progreſs in two years, than ſuch as are half-ſtarved during the Winter uſually do in five. But, as there are many extenſive tracts, where the nature of the ſoil and other circumſtances prevent green crops from being introduced to any great extent, it is of much importance to perſons poſſeſſing farms in theſe parts, to be able to ſubſtitute ſomething in their place:—that ſubſtitute, nature has bountifully provided, even in the moſt expoſed ſituations.

The article we mean, is *heath*; which, from the experience of ages, is known to contain a wholeſome and palatable nouriſhment, when eaten in a green ſtate; and, it is well known, proves that every kind of green herbage, hitherto employed for feeding our domeſtic animals, is alſo calculated to ſupport them in health and vigour, when dried, provided

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it is cut at a proper period, and due pains taken to preſerve it. The value of the different kinds of ſtraw and hay is ſo well known, that it would be abſurd to attempt any reaſoning upon it.—Have we the leaſt room to ſuppoſe, that heath, if cut at a proper ſeaſon, and well managed afterwards, would not alſo be found highly uſeful?

Growing in ſituations where ſcarce any thing elſe will thrive, the qualities of heath have not only been overlooked in many inſtances, but its very exiſtence deemed a reproach upon the ſoil. That it was not conſidered in the ſame light by our anceſtors, is evident, from their underſtanding its qualities ſo well, as to be able to prepare from it a fermented liquor, of a highly agreeable flavour, and an intoxicating quality, which was uſed upon all their great occaſions. Indeed, we have a tolerable confirmation of this fact, by attending to the paſture of bees upon heath; from which, in a given time, they collect more honey than is uſually done from the richeſt fields of white clover during the ſame ſpace: and, as it is now aſcertained, that the food of bees is derived from the ſaccharine or fermentable matter contained in the flowers upon which they feed, and which acquires the diſtinguiſhing properties of honey, merely by paſſing through the veſſels of the inſect, and the particular organization of theſe veſſels, it may ſafely be inferred, that heath, when properly managed, contains properties greatly ſuperior to what it is generally thought to poſſeſs. Were any doubt to remain, additional conviction would ariſe from the high flavour and other good qualities of the Highland mutton, ſo juſtly celebrated over the whole iſland, reared in ſituations where the animals have not any other food but heath.

In Sweden, the practice of cutting heath for Winter food has long prevailed; and the heath-harveſt, in ſome parts of that country, is as regular, and as much attended to, as the corn-harveſt in the moſt fertile provinces. Long experience has taught the natives its value, and furniſhed an example that ought to be followed by other nations, ſimilarly circumſtanced as to ſoil and climate. In that country, it conſtitutes a bulky and eſſential article of Winter food, in many ſituations where no other can be obtained. Little coarſe hay is produced in the Swediſh hills and uplands. Sown graſſes are unknown. Straw and turnips are equally ſcarce, except in the corn provinces; and even there, the only broad-leaved crop cultivated for Winter food, is the roota baga, or Swediſh herb; a vegetable that unites, in a conſiderable degree, the

qualities both of the cabbage and turnip. But, allowing turnips, hay, and other articles to be produced in much greater quantity than they are, even in the moſt fertile of the Swediſh provinces, it would be found impoſſible to tranſport them to the higher diſtricts, owing to the very inacceſſible nature of the country, the badneſs, indeed the almoſt entire want, of roads, and other unfavourable circumſtances. Thus inſulated, and cut off as it were from every ſupply but the produce of their own mountains, neceſſity has, with the boors of Sweden, become the parent of induſtry and invention, and taught them to appretiate the value of an article (deſpiſed or neglected in other countries) which they find fully adequate to their wants, and have for the trouble only of cutting and curing.

Were we ſimply to reaſon upon the ſubject, we would ſuppoſe, that a practice which has obtained for a length of time in any country, and from experience been found uſeful, would be adopted in every ſimilar ſituation. Britain reſembles Sweden in many reſpects. Both countries can boaſt of the moſt fertile corn provinces in Europe, and, in both, there is a large extent hilly and mountainous. It is well known, that theſe parts of Sweden, by the induſtry of the inhabitants, are rendered highly productive, principally by their management of heath. Have we any reaſon to think, that the produce of the hilly and mountainous parts of Britain would be leſs valuable, or of a quality leſs nouriſhing? The ſoil is, in every inſtance, equally good, and the advantage, in point of climate, greatly in our favour. This laſt circumſtance renders the cutting and ſubſequent treatment much eaſier in this country, than it poſſibly can be there.

At preſent, the uſage of the high lands and uplands throughout Britain, is to burn the heath, with a view to improve their paſture. By that operation, the tops of both heath and graſs are completely deſtroyed, and a conſiderable time elapſes before new ſhoots are produced; whereas, were the heath cut for Winter food, in the way we have mentioned, it would ſend out new ſhoots the following Spring; which, being of a tender and ſucculent nature, would form a palatable article of food for ſheep, with this additional advantage, that the graſs which grows amongſt it would ſpring up at the ſame time, and add to the value of the paſture.

In caſes where heath grounds have been cut or burnt for a few years, if the ſurface is tolerably ſmooth, the heath may be cut with a ſtrong ſcythe; but when it is of many years growth,

growth, and the ſtems have become hard and thick, that inſtrument will not be ſo very proper, as it is liable to bend, and get out of ſhape, and little work can be done with it in a given time. Other inſtruments have been propoſed, and certainly might be employed with advantage; but farmers, who are not in poſſeſſion of theſe, may make very ſatisfactory experiments, by cutting it with a common hedge-bill, an inſtrument with which a labourer can cut a conſiderable quantity in the courſe of a day.

With regard to the time of cutting, that ſhould be determined by the ſeaſon, and other circumſtances. Experience, which, in every caſe where it can be reſorted to, ought to be the ſtandard, both of opinion and practice, eſtabliſhes the fact, that cutting at an early period of the ſeaſon is the moſt certain way of obtaining a valuable and nouriſhing herbage. When we ſay early, no particular month, or period of any month, is meant; earlineſs depending entirely upon the ſeaſon, which, in an inſular ſituation like that of Britain, is very variable. The moſt certain criterion is, the progreſs the plants have made in their growth; as, at a certain ſtage, they poſſeſs properties, which are either impaired, or entirely loſt, if they are ſuffered to ſtand longer. Perhaps, when the flowers are fully expanded, the heath will be found moſt nouriſhing. Indeed, ſhepherds and others, who have paid much attention to the ſubject, think the paſture moſt valuable during the time it continues in bloom. If poſſible, it ſhould always be cut during dry weather, and immediately thrown into cocks or heaps, where it may remain for a week or ten days; after which, it may be put into large ricks, and allowed to ſtand, till it is found convenient to carry it to the ſituations, where there is a chance of its being uſed through the Winter.

In recommending a practice, which in Britain is entirely new, much diffidence and circumſpection are required; and, could no inſtance be quoted of the beneficial effects reſulting therefrom, leſs would have been ſaid upon the ſubject. The example of Sweden, however, where both ſoil and climate are inferior to ours, holds out to the ſtore-farmers of Britain a tolerable proſpect of ſucceſs. To thoſe immediately concerned, the matter is of conſiderable importance; and, as very ſatisfactory trials can be made, at a trifling expence, we indulge a hope, that the hints now thrown out will not be altogether uſeleſs to ſociety. A. Z.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Proper Mode of Ridging a Wet Clay Soil.

GENTLEMEN,

A PERIODICAL publication, such as yours, to put on record the facts that occur to the practical farmer in the course of his business, must tend to the improvement of Agriculture, and will ultimately prove of general utility to mankind. It is therefore to be hoped, that the intelligent farmers in Scotland will not let slip the opportunity of making observations on every subject relative to country affairs, and send you the result of their experience; that, by insertion in your Magazine, they may not be lost to the public; and, by accumulating a number of facts, be the means of establishing a more perfect system of agriculture: For it is partly owing to husbandmen living in the country, at a distance from neighbours, that agriculture has not arrived at the same degree of perfection with the arts carried on in towns. Farmers, however, endeavour to remedy the inconvenience of their situation, by communicating freely to one another their knowledge in rural affairs; whilst the wary inhabitant of the town endeavours to veil in mystery every process in his art, and transaction in his business: But the sphere of a practical farmer's communications must be confined to a very narrow circle; and for this, a publication such as yours, if farmers will only come forward with their observations, must be attended with beneficial effects to society. With this view, I now transmit you a few observations on the proper mode of forming ridges on a wet clay soil. It appears, from the remains of the ancient ridges in East Lothian, and I suppose also in every cultivated county in Scotland, that all the fields in cultivation, both of a wet and dry soil, were originally formed into high-gathered ridges, of betwixt thirty and forty feet in breadth. None of these were found straight, but were extended in well turned serpentine lines; which induced many, who have a great regard for the wisdom of our ancestors, to believe that they were formed in that manner on purpose, as being the propereſt for draining off the superfluous water, and best adapted for serving every purpose in agriculture. This, however, is an erroneous opinion; for the straight line

is,

is, of all others, the beſt calculated for carrying off water with the greateſt celerity, thereby rendering a wet ſoil as dry as poſſible, which is of the utmoſt importance in the cultivation of the different grains at preſent in uſe in our northern climate. The curved form of theſe old ridges, certainly was occaſioned by the long teams of oxen and horſes which were formerly yoked in the plough, even to the number of twelve or fourteen, which, beginning to turn before the plough arrived at the end of the ridge, gradually changed it from the ſtraight line, till, in proceſs of time, the ſerpentine form was extended to the whole ridge. But theſe curved broad ridges, although ſanctioned with the ſtamp of antiquity, have, almoſt all of them, in this country, been levelled, and reformed into ſtraight narrow ridges, of from fifteen to eighteen feet in breadth. This operation was, however, always attended with a temporary loſs: for, unleſs great attention and expence was beſtowed, in preſerving the old vegetable mould on the ſurface, it was buried, in many places, beyond the roots of the plants which we cultivate, and a ſterile ſubſtratum of till brought up to ſupply its place, on which plants cannot be made to grow with the ſame vigour, as on the old ſurface ſoil. I do not know when narrow ridges were firſt uſed in England; but I have reaſon to believe, that the late John Cockburn of Ormiſton introduced them into Scotland early in this century. I have obſerved ſome ridges on the eſtate of Ormiſton, formed at an early period, at the breadth of ſix and nine feet. Theſe were ploughed alternately; the crown of the ridge, this year, forming the open furrow betwixt the ridges next year: But this form does not ſeem to have given ſatisfaction; for the whole ridges on the eſtate, at laſt ſettled at fifteen feet; which was of a ſufficient breadth to give them a conſiderable roundneſs, ſo as to allow the water to run with rapidity off the ridge into the furrow. When I entered to my farm, which is of a ſtrong wet clay ſoil, or brick loam, being a mixture of ferruginous clay, and vegetable mould, with a large portion of ſand in it—the under ſtratum a yellow ochrey clay, with a larger portion of iron and ſand, which conſolidates into a hard maſs, that admits of no water to paſs through it,—I found the ridges all of the breadth of fifteen feet, and continued them of that breadth, till about fourteen years ago, that, happening to ſee a letter from Mr Arthur Young, now Secretary to the Board of Agriculture, to a neighbour farmer, wherein he mentioned, that Mr Arbuthnot, who was eſteemed one of the beſt farmers in England, had found, from experience, that a

ridge, of the breadth of from thirty or forty feet, sufficiently rounded, was the propereſt form for laying a wet clay ſoil dry; I immediately determined to try the experiment, and pitched upon a field of ſeven acres, that was already formed into fifteen-feet ridges; and, in order to form the broad ridges in a gradual manner, I continued for ſeveral years to caſt two ridges together, keeping an open furrow in the crown, till I got them of a ſufficient height, and properly rounded, when the open furrow was diſcontinued, which formed one high and broad ridge of thirty feet. The field was then Summer-fallowed, dunged, and ſown with wheat; the crop a good one, but not up to what I was entitled to expect. In the following Spring, which was a dry one, it was ſown, in good condition, with beans and peas, in the proportion of one pea to three beans. A few days after the field was finiſhed, one of the moſt extenſive farmers in the county paſſing it, ſaid to me, 'I ſee you are making trial of broad 'ridges; they are excellently formed, being well rounded, 'and of a proper height. I have not a doubt, that, if I chance 'to paſs your farm ſome years hence, I ſhall find all the 'ridges upon it formed after the ſame model.' Theſe broad ridges, which had thus received the approbation of this expert farmer, were ſoon put to the teſt. The weather broke, and a very wet Summer followed. Upon examining the field, from time to time, it appeared to me to be evidently injured by the breadth of the ridges: there was ſuch a preſſure of water on the ſides of the ridges, from their great breadth, that the clay ſoil, which had been highly cultivated in the Spring, was diſſolved into mud, in ſo much, that the water furrow betwixt the ridges almoſt diſappeared. When the crop came to be cut, not a ſingle pea was to be ſeen on the broad ridges, having all died early in Summer. The beans, a ſcanty crop, were evidently ſtinted in their growth by the wetneſs of the ſoil, few of them exceeding eighteen or twenty inches in height; but, on a round narrow ridge in the field, although of an inferior ſoil, there was a conſiderable number of peas at harveſt, and the beans were much more luxuriant in their growth. I muſt again obſerve, that the Summer was a remarkably wet one. A neighbour, who had a field of good beans, ſown upon caſten ridges of fifteen feet in breadth, ſhowed me an odd ridge in the field that was gathered, on which he had a third more beans than on any of the caſten ridges, which proved the neceſſity of laying beans dry this ſeaſon. After the beans were got off, the ridges were gathered, for laying them dry during the Winter; but, in the

Spring,

Spring, the soil was in a wet cohesive state, and did not pulverize in ploughing. Barley was sown upon it, and I again examined with attention the state of the field during the course of the Summer. It appeared to me to receive greater injury from the wet weather, than the neighbouring fields with narrow ridges of fifteen feet. The crop of barley was a scanty one; clover and rye grass followed the barley, and then oats, which finished the rotation. Not being satisfied with any of these crops, nor the state of the soil after the rotation was finished, I was determined to abandon the broad ridges, and make an experiment on a field formed into ridges even narrower than fifteen feet. The one in my eye was of a wet clay soil at one end of the ridges; but the greatest part of it, although of a clay soil, was drier, being situated on a hanging bank, with a substratum that allowed the water to pass through it. The crops that grew upon this drier part of the field, were always destroyed by the cut-worm, and produced nothing, some years, but a narrow skirting of grain, next the open furrows, betwixt the ridges. Observing that these worms infested the most elevated parts of the ridge, I conjectured, that, by forming the field into twelve-feet ridges, and keeping them flat, ploughing them crown and furrow, without even water-harrowing the drier part after it was sown, would tend to prevent the cut-worms from making such devastations on the young plants, before they push out their surface roots: for, whenever the plant arrives at this stage of its growth, the danger from the worm is over: and I had the satisfaction to find, it had the desired effect of stopping the ravages of these destructive animals, in this particular instance. But the consequences attending the ploughing the field alternately in ridges crown and furrow, particularly on the wet part, was evidently hurtful to the crop, for the following reasons. It is obvious, that the ploughman, in deepening and clearing out the water furrows betwixt the ridges, must go deeper with his plough in that part of the ridge, than in any other; and, in a clay soil, they cannot be made too deep. When, therefore, the ridge comes to be reversed, there is a solid base of soil under the cultivated surface, and, more frequently, a solid base of till, through which no water can pass (the clay on the surface being in general nearly turned up with the plough shelving in this manner)

from the furrows, towards the middle of the ridges; but it is obvious, that this inclined form, A B, of the surface of the solid

ſolid under-ſtratum, towards the centre of the ridge, muſt be extremely unfavourable for allowing the ſuperfluous water to drain off from the pulverized ſoil into the water-furrows; and, conſequently, I always found the crops growing upon them materially injured in wet ſeaſons, and ſometimes nearly deſtroyed. But a loſs alſo attends this mode of ridging a clay ſoil, even in dry ſeaſons, when a deficiency of the crop, on the middle of the ridge, is to be obſerved, where it ought to have been beſt. This is eaſily to be accounted for. Every practical farmer knows, that, when a clay ſoil is ploughed, eſpecially in a drought, it is laid ſo open, by its crumbling into large maſſes, that the ſun and air in a few hours carry off its moiſture, and render it unfavourable for vegetation. When we add to this, that the ſides of the open furrows, and contiguous ſoil, over which the Winter rains and melted ſnows have paſſed, from being conſolidated with ſo much moiſture, become extremely hard in time of drought, this hardened ſoil on the ſides of the open furrow, being turned up by the plough in clods of different ſizes, when laid together in forming the crown of the new ridge, cannot be ſo well pulverized as the reſt of the ridge; and, conſequently, the drought continues to take a greater effect in depriving it of moiſture. To theſe cauſes I attributed the deficiency of the crop on the crown of the ridge in dry ſeaſons. But, of late years, our crops have ſuffered from too much moiſture; and the wet clays, that have been ploughed crown and furrow, in alternate ridges, have ſuffered accordingly. Paſſing, the other day, through ſome fields in the neighbourhood of Edinburgh, where that practice prevails on ſuch ſoils, I was ſhocked to ſee their wretched appearance; fields of beans, and other grains, with the couch graſs ſpringing up in them, thicker, and with greater luxuriance, than the oats or barley; ſome of the farmers in that neighbourhood ſeeming to deſpiſe good culture, in truſting to the ample doſes of dung they procure from the city of Edinburgh. Being thus convinced, both from reaſon and experience, that neither a very broad ridge, although well rounded, nor a flat narrow one, are proper forms to be uſed in ploughing wet clays; for ſome years paſt, I have adopted upon my farm well rounded ridges, of the breadth of twelve feet, gathering them up twice from the level for Summer fallow wheat, generally harrowing the field acroſs the ridges before the ſeed furrow, to keep them the flatter. After the wheat is off, the ridges are gathered before Winter: in the Spring, beans are put in, after caſting

caſting the ridges: but before the ploughman begins, I make him go two bouts, throwing in the earth into the furrow that is to be ploughed out betwixt the ridges when they are finiſhed; this keeps the ridges equally round, and all the furrows in the field nearly of an equal depth: gather after the beans before Winter; in the Spring, caſt the ridges for barley, throwing in the open furrows as before; or, if neceſſary to give two furrows in the Spring, caſt them twice, as, I think, cleaving ridges for barley ought to be avoided upon a wet ſoil, if poſſible; for the open furrow in the crown, even when laid cloſe with a gathering, tends to lodge water there, for the reaſons above aſſigned. I have alſo obſerved, that when a field of clay ſoil is ploughed acroſs the ridges, after they have been cloven and harrowed, the ſoil on the ſides of the open furrow on the crown, turns up in a more coheſive ſtate than the reſt of the ridge: this is owing to the plough's not going ſo deep, contiguous to the open furrow, whenever it loſes reſiſtance, on the land ſide, to keep it in the ground. By this mode, of always gathering the ridges before Winter, and caſting them in the Spring, the ſolid earth under the cultivated ſoil is continually kept in the ſame rounded form with the ſurface of the ridge, to which the floods of rain, ſinking, run off expeditiouſly to the open furrows betwixt the ridges; and theſe being deep, and cleared of obſtructions, from the ridges being gathered before Winter, convey it with rapidity off the field, in proportion to the number of open furrows in it. I have therefore always found a well rounded twelve-feet ridge to be drier, and work better in the Spring, than a fifteen-feet ridge; and even a ten-feet, than one of twelve. But there are inconveniences that attend a very narrow ridge, which are not counterbalanced by its ſuperior dryneſs: I therefore would not recommend them to be formed under twelve feet. If they are to be kept in tillage, four harrows, or two breaks, cover them; and I have not found that they are attended with waſte of ſeed, as I never exceed three firlots of wheat or barley, and a boll of oats per acre, the quantity I ſowed on fifteen-feet ridges. I have now finiſhed my obſervations on the proper mode of forming ridges on a wet clay ſoil; if you think them worth the notice of the public, you may inſert them in your Magazine. But as a number of your readers will no doubt favour broad ridges, I ſhall be glad to hear what they have to advance in their defence; for it is only from a free diſcuſſion of ſentiments, through the medium

of

of the preſs, that error is to be exploded, and truth diſcovered, for the benefit of mankind; which, whenever it is attained, is the ſource of much happineſs to a lover of agriculture.

Banks of the Tyne, 2d June 1800. RUSTICUS.

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the Agriculture of the County of Fife; with Obſervations on the means of its Improvement. Drawn up for the conſideration of the Board of Agriculture and Internal Improvement, by JOHN THOMSON *D. D. Miniſter of Markinch.* 413 *pages*, 8*vo.* Creech, Hill, &c. *Edinburgh;* Nicol, *London.*

IT is a circumſtance extremely creditable to the Eſtabliſhed Scotiſh Clergy, that ſuch of their number as were appointed, under the authority of the Agricultural Board, to aſſiſt in the great work of executing a detailed ſurvey of the kingdom, have performed the reſpective parts aſſigned to them with ſingular ingenuity and judgement; while, in England, where the profeſſion is ten times more numerous, only one ſolitary individual, to the beſt of our recollection, viz. the Reverend Arthur Young, was ſelected from the clerical order for handling the labouring oar upon this important occaſion. The office of a ſurveyor, required that the perſon appointed ſhould be intimately acquainted with the different branches of rural economy and practical huſbandry, together with the poſſeſſion of a ſteady and enlightened mind, capable of diſcerning abuſes, and deſcribing how they might be rectified. Theſe qualifications appear to have fallen to the ſhare of the ſeveral clergymen whoſe reports have come in our way, in an eminent degree; and their labours promiſe to be equally uſeful, and deſerve as much applauſe, as if they had proceeded from the moſt perfect and practical ſcientific agriculturiſt.

The ſituation of a country clergyman, if his mind is devoted to rural affairs, preſents an excellent opportunity of accumulating a large ſtock of practical knowledge. Poſſeſſed of a glebe, (ſmaller, we confeſs, than the general merits of the profeſſion deſerve), he has it in his power to try all the different

different improvements which faſhion or the times recommend; and, if in good habits with the tenantry, (which every clergyman, if he wiſhes to be uſeful, will aſſiduouſly ſeek to be), he enjoys the fulleſt means of procuring information reſpecting the ſeveral branches of huſbandry, and comparing every theory, whether ſpecious or well-founded, with the different operations daily carried on before his eyes. If an obſerving mind is added, the perſon ſo ſituated, can hardly fail to be well qualified for deſcribing the rural œconomy of the diſtrict with which he is connected.

We have already (page 191.) examined the works of one reſpectable clergyman, and now proceed, with equal ſatisfaction, to open up the labours of another. As this gentleman had a path to tread only ſlightly marked out, the natural difficulties of the office were conſequently augmented: Theſe he has ſurmounted, with credit to himſelf; and, though we differ from him upon a few points, yet we have no difficulty in acknowledging, that he has deſcribed the huſbandry of the diſtrict in which he reſides, in a diſtinct and perſpicuous manner.

Fife is a diſtrict of great importance, and may be ranked in the ſecond claſs of agricultural counties. Local circumſtances confer many advantages upon it, being waſhed by the ſea, and the Friths of Forth and Tay, upon three ſides, from which a great ſtock of manure is conſtantly procured; and the abundance of limeſtone and coal upon its ſouthern ſhore, is not only advantageous to agricultural improvements, but highly conducive to the comfort of the inhabitants. Theſe circumſtances are ſatisfactorily detailed in the firſt chapter of the work, from which the reader will derive much uſeful information.

Property is greatly divided in this county; perhaps more ſo than in any other part of North Britain, which Dr Thomſon thinks is attended with the happieſt effects. The valued rent is 361,584l. Scots, which is above one tenth of the kingdom, and is a ſtrong proof that improvements had taken place at an early period. The *real* rent of many counties exceeds in pounds Sterling the nominal valuation in Scotiſh money; whereas, in Fife, the former is more than one third below the latter, being calculated at 212,000l. Every calculation of this nature, however, is queſtionable, being built upon hypotheſes, which do not afford any ſolid proof.

Our author is an enemy to entails, and we cannot but applaud the judicious ſentiments offered upon this article. No doubt,

doubt, the evil of entails is much leſſened by a late act of Parliament; but ſtill they are attended with injurious conſequences to the proſperity of Britain, whether conſidered as an agricultural or commercial country. We ſelect the whole of this ſection, as deſerving ſerious attention.

"Tailzie, or entail, though ſometimes uſed to denote ſimple deſtination, is chiefly uſed to ſignify the ſettlement of a land eſtate upon a long ſeries of heirs, ſubſtituted, in ſucceſſion, to one another, containing prohibitory and irritant clauſes, which preclude any of the heirs from alienating the eſtate, by debt or deed, in prejudice of the ſubſtitutes ſpecified and fixed by the deed of entail. What proportion of the land in Fife is under this kind of deſtination, it is impoſſible, from any information I have been able to procure, exactly to ſtate. It is well known, however, that a great many eſtates, and ſome of theſe of the firſt magnitude, are ſtrictly tailzied.

"How far this mode of ſettling the ſucceſſion of heritage is wiſe and proper, may deſerve conſideration. To aſſume the power of determination juſt now, who ſhall poſſeſs the eſtate 500 years hence, when the preſent proprietor ſhall have as little intereſt in it as he had 500 years ago, has at leaſt the appearance of abſurdity. Perhaps, ambition to perpetuate the exiſtence of a family called by his name, at leaſt for many generations to come, is the motive. But, is vanity a principle of conduct which a virtuous and dignified mind would wiſh to adopt, or to avow? Or, is it his object, in ſecuring to his poſterity the unalienable poſſeſſion of his lands, that they may be enabled to ſupport, with greater dignity and ſplendour, the titled rank to which he has raiſed them? But is it certain that the poſſeſſion of the eſtate will prevent them from diſgracing the nobility, fairly, and perhaps hardly won, by the illuſtrious deeds of a worthy anceſtor?

"It merits conſideration, alſo, whether entails may not be unfriendly and injurious to the proſperity of a great commercial and manufacturing nation. The free circulation of land property is a powerful ſpur to enterprize and exertion; as, by that means, the merchant or manufacturer has it in his power to retire, when he thinks proper, from a hazardous employment, and to convert the profits of his ſucceſsful induſtry into a more ſtable and permanent inheritance. But, were all the eſtates in the kingdom guaranteed by entails to the preſent proprietors and their poſterity for ever, this would be rendered impoſſible.

"Beſides its being an unnatural reſtraint upon property, it not unfrequently puts it in the power of profligacy and diſſipation,

tion, to enſnare the honeſt tradeſman, who may not be appriſed of the terms upon which his employer holds his eſtate.

" Entails have often the unhappy effect, likewiſe, of reſtraining, within too narrow limits, the operations of natural affection, and natural juſtice, by putting it out of the parent's power to make a ſuitable proviſion for the younger branches of the family.

" Nay, in many inſtances, they prove a great bar to the progreſs of agricultural improvement. If the proprietor has a large family, when he finds that he can neither burden his eſtate, nor alienate any part of it, inſtead of devoting a liberal portion of his income to the amelioration of his lands, the advantages of which muſt be ultimately reaped by the heirs of entail, he will be led to ſave every ſhilling in his power for the education and ſettlement of his younger children. Or, if he has no heirs of his own body, and his eſtate, agreeably to the nature of the entail, muſt paſs into the hands of a diſtant relation, or of one with whom he has little connexion, and for whom he has little friendſhip, he will be equally indiſpoſed to project and execute ſchemes of expenſive improvement.'

A very ample and favourable character of the Fifeſhire farmers is given in the fifth chapter, which conveys to us a high idea of the author's liberality and candour. Some ſurveyors have not conſidered the Farmer in the point of view taken up by Dr Thomſon, but deſcribed him as a perſon ſecluded from ſociety, and deſtitute of information. The following paſſages we extract as a ſpecimen.

" From the progreſſive improvements in the ſcience and practice of agriculture, which have been going forward during the laſt twenty or thirty years, the condition and circumſtances of the farmers have experienced gradual alteration for the better. And their growing affluence, co-operating with the general progreſs of luxury and refinement through the nation, have had a very viſible effect upon their manners and habits of life. Formerly, it was cuſtomary for the farmers to ſubject themſelves to every kind of drudgery and hard labour, undergoing the ſame toil, and often eating at the ſame table, with their ſervants. And, in ſome inſtances, this may be the caſe ſtill, eſpecially where their farms are ſmall, their circumſtances narrow, their rents high, and conſequently cannot afford to exempt the maſter from perſonal labour. But many of the farmers now occupy a more reſpectable and important ſtation. Their chief buſineſs is to ſuperintend. The operative and ſervile part is committed to others; but the maſter's preſence and direction are everywhere

where to conduct and forward the various neceſſary operations, in every department, and in their proper ſeaſon. Theſe requiſite attentions, together with the buſineſs of the counting-room, and his attendance on markets, for the diſpoſal of his grain and cattle, (a province which he uſually reſerves to himſelf), will afford little time for relaxation or idleneſs, and are ſurely much more conducive to his intereſt, than holding the plough, thraſhing the grain, or filling and driving his own dung-cart.

"The alteration in their ſtyle and manner of living, is equally remarkable. Their houſes, in general, are decently and ſubſtantially furniſhed, and the apartments ſo arranged, and the general economy of the houſe ſo regulated, as to produce a more marked diſtinction between maſter and ſervant, and to put an end to that indiſcriminate intercourſe, in reſpect of ſitting and eating, which was common in former times. Though many of them continue to be moſtly ſupplied with neceſſary maintenance from the produce of their farms, and to be clothed with their own manufactures, there are few who do not indulge, more or leſs, in the luxuries of life. Butcher meat is much commoner now than formerly; and their Sunday's dreſs, at leaſt, is furniſhed from the ſhop. The univerſal uſe of tea, as an article of living, need not be mentioned, as there is ſcarcely a cottager's houſe in the county, where it is not to be found. It is to be obſerved, however, that between the great body of the farmers, and thoſe who rank in the higheſt claſs, there is, in this reſpect, a very remarkable difference. Several of this laſt deſcription are men, not only in eaſy, but affluent circumſtances; men who have had the advantage of a liberal education, and whoſe manners, from their intercourſe with the world, have acquired a ſuperior poliſh. Correſpondent with theſe circumſtances, is their ſtyle and manner of living, the elegance of their furniture, the economy of their table, and the quality and faſhion of their dreſs. Thus diſtinguiſhed by education, fortune, and manners, they hold a moſt reſpectable place in the community, and are entitled to be conſidered as one of the intermediate links, which, in the gradations of rank and opulence, connect the higher and lower orders of men in ſociety."

We cannot agree with Dr Thomſon as to the propriety of paying rent in kind, even upon the ſuppoſition that the *ipſa corpora* was not to be delivered, but to be paid for in money, according to the rate of the fiars. If ſuch a mode had been common this year, three fourths of the tenantry would have been reduced to bankruptcy; it being evident that the rent,

rent, under ſuch a regulation, would uniformly be greateſt when the tenant was leaſt able to pay an advance. Let us ſuppoſe that two bolls of grain (no matter of what kind) was the average rent of arable land, and that this, in ordinary years, amounted in money to 1l. 10s., which might undoubtedly be paid when a fair crop was procured. But reverſe the caſe, and ſuppoſe that adverſe circumſtances had occaſioned a failure of the crop, to the extent generally calculated this ſeaſon, viz. three eighths; which failure would leſſen the tenant's ſales perhaps three-fourths, the ſame quantity as uſual being required for ſeed corn and home-conſumption. Now it might happen, and we are certain it has happened during this ſame year, that the tenant had not a quantity of produce to ſell equal to the value of the *ipſa corpora* he was bound to pay the landlord, independent of the ſums neceſſarily required for defraying the expences of his farm, which, in unfavourable years, are always augmented; whereas, had the rent been paid in money, the extra-price received for the bolls ſold, might have compenſated for the deficiency of his ſales. Land is diſpoſed of in perpetuity for money, and why ſhould not its annual value for a limited time be aſcertained in like manner?

We differ from the opinion given p. 145, reſpecting the proper breadth of ridges upon wet ſoils; being experimentally convinced that narrow ridges are pernicious in the extreme, in ſuch ſituations. Where the ſoil is of ſufficient deepneſs to bear three gatherings from the flat, without impoveriſhing the furrows, twenty-four feet is an excellent breadth; under different circumſtances, they ought never to be leſs than eighteen feet; for all wet lands require a degree of acclivation not to be gained with propriety upon a leſſer breadth. Caſting is a bad method of ploughing, if it can be avoided, and is as ſeldom reſorted to by good farmers as poſſible. If croſs-ploughing was more practiſed, there would be little cauſe for the caſting of ridges, where a ſuitable rotation of cropping is adopted.

An extenſive improvement upon the Lomond-hills, formerly attached to the palace of Falkland, but now the common property of the ſurrounding heritors, is very properly recommended. From the nature of the law of 1695, we ſuſpect it will be found neceſſary to apply for a particular act of Parliament, before this valuable ſubject can be divided. The following extracts will ſhew the loſs ſuſtained by allowing this commonty to remain in its preſent ſtate.

" The following information, afforded me by a neighbouring heritor, appears to place the matter in a new and important point of view, and ſhows how highly advantageous the diviſion of this commonty would be to all concerned.

" This gentleman has lately incloſed about 170 acres of ground, contiguous to, and of very much the ſame quality of ſoil, with the Lomond hills. This ground, in its former ſtate, yielded a rent of little more than 15d. the acre. Laſt year, he let it as a graſs park, for fifty guineas; and this year, although one of the moſt unfavourable ſeaſons experienced for a long time paſt, it has maintained above ſeventy head of cattle.

" From the above experiment, this gentleman makes the following calculations: The Lomond hills are of a quality no way inferior to the park above mentioned: therefore he reaſonably concludes, that, in a divided and incloſed ſtate, they would maintain above 1400 head of cattle; if grazed with ſheep, the profits would probably be ſtill greater: a very different return, indeed, from that which the proprietors now draw from it, in its preſent neglected ſtate. He concludes with obſerving, that the hill abounding with limeſtone and freeſtone quarries, the expence of incloſing would not be heavy."

Dr Thomſon appears to poſſeſs juſt ideas reſpecting the utility of *lime*, when uſed in huſbandry. He conſiders it in the light of an *alterative*, which we have always found it to be, in the courſe of our practice.

A very accurate deſcription of the Fife breed of cattle is given, chap. 13th. A great proportion of the county being adapted to the breeding and rearing of young ſtock, it is undoubtedly a matter of importance that ſuitable attention be paid to the ſelection of a proper breed. Dr Thomſon ſtates, upon the authority of a dealer, that a Fife bullock of forty ſtones will bring an equal price, in Smithfield market, with an Engliſh bullock ten ſtones heavier, and equally fat; and that they are generally ſelected by the butcher for the moſt luxurious of his employers. An engraving of a fine bull lately in the poſſeſſion of the Earl of Leven, and bred by Mr Robert Ruſſel, one of his Lordſhip's tenants, is given, which conveys a very favourable idea of the properties of this valuable breed.

Dr Thomſon is friendly to the working of oxen, in preference to horſes, though he candidly acknowledges that the general opinion is in favour of the latter, and that " there is not perhaps one ox employed at preſent, in the plough or cart,

cart, for ten that were uſed twenty years ago;" a fact we ſhould conſider as deciſive upon the ſide of horſes; for the greateſt part of mankind are ſharp enough ſighted in ſuch matters, to chooſe always what is moſt conducive to their own intereſt. If oxen had never been wrought, their utility would have been problematical; but when they were at one time the uſual beaſts of labour in this country, and have regularly been laid aſide as improvements were introduced, a doubt can hardly be entertained reſpecting the ſuperiority of horſes.

We are ſorry that the nature of our work prevents us from doing juſtice to that portion of the report which treats upon the ſituation of the *parochial ſchoolmaſters*. Animated with the ſame ſentiments which influenced Dr Thomſon upon this occaſion, we join him in reprobating the ſcheme of depriving the lower ranks of the benefit of education, as inconſiſtent with ſound policy and productive of the moſt ſerious miſchief to the ſtate. The caſe of the parochial ſchoolmaſters deſerves the commiſeration of the landed intereſt; as at this time their general ſituation is much worſe than the meaneſt labourer. If it was neceſſary and proper for the Parliament 1696, to ordain that they ſhould be provided with ſalaries, very probably ſuited to their ſtation according to the value of money at the time, it certainly, under exiſting circumſtances, is equally neceſſary and proper that theſe ſalaries ſhould be advanced in a proportional manner to the riſe that has taken place upon the neceſſaries of life; otherwiſe, *after the preſent incumbents are ſtarved out*, the office will remain unſupplied, or be filled with perſons incapable of educating the riſing generation.

The *ſhort endurance of leaſes*, is ſtated as one of the greateſt obſtacles to improvement; and it is really ſurpriſing that proprietors ſhould ever expect that their lands will be improved, by perſons who have not a ſuitable intereſt in the iſſue of ſuch improvements. We have always conſidered this queſtion in a public point of view, unconnected with the benefit of private parties, unleſs ſo far as their exertions were neceſſary to inſure a general advantage. If land, therefore, is held under a ſhort tenure; if reſtraints are impoſed upon the activity of the tenant; if he is prevented from cultivating and improving the ground in his hand, in ſuch a way as to render it capable of returning the greateſt quantity of produce; then the public intereſt is injured, and the capital ſtock of the country is leſſened and deteriorated.

Lord KAMES's *plan of a leafe* has been much applauded; but it was left to Dr Thomfon to fhew the reafon why it has not found its way into general practice. While fuch a mode of leafehold is evidently advantageous to the public good, becaufe it promotes improvements, it certainly is prejudicial to the landlord's intereft, upon the account here affigned, viz. that it throws into the tenant's hands every benefit that may arife from an increafe in the value of produce, or, which is the fame thing, from a fall in the value of money We have not heard this objection offered before; and acknowledge the force and propriety of it.

Dr Thomfon confiders *road-money*, even when the tax is impofed during the currency of a leafe, as no material hardfhip upon the tenant; becaufe the advantages derived from the improved ftate of the roads, do more than compenfate for the duties they are liable to pay upon this account. While we are fully fenfible of the eminent benefits procured from the poffeffion of good roads, and acknowledge that no tax whatever, fo far as it includes his real fhare, ought to be paid with greater cheerfulnefs by the tenant, we feel ourfelves obliged to remark, that the Doctor's difcernment has here been rather afleep. Do not good roads contribute as much to the improvement of an eftate as any other local advantage? and if thefe roads are repaired at the expence of the tenantry, which is the principle of all our ftatute-labour acts, does not the eftate become confiderably improved at the conclufion of the leafe, without the expenditure of a halfpenny by the owner, but at the fole expence of others? If the ftatute-work was equally divided, like poor-rates, and other public burdens, the one half payable by the proprietor, and the other half by the poffeffor, no caufe of complaint would remain; the tenant's proportion would be reimburfed by the fuperior facility with which he paffed the roads during the currency of his leafe, while the proprietor would be compenfated by the increafed value of his eftate.

A very refpectable lift of fubfcribers is annexed to the work; and it gives us much fatisfaction to learn, that a fecond edition is in contemplation. We cordially offer our beft wifhes for its future fuccefs, being fully convinced that it is in general executed upon liberal principles, and with an ardent defire to promote an object of primary importance, viz. the Profperity of Britifh Agriculture. N.

General View of the Agriculture of the West Riding of Yorkshire.

(By a GENTLEMAN in Yorkshire.)

Continued from p. 207.

HAVING considered the first seven chapters of this work with much attention, we now proceed to examine its remaining parts. Indeed, we can hardly bestow too much pains in analyzing a performance which so fully describes the agriculture of a district deservedly ranked as the first in the kingdom.

Chap. 8. *On Grass*, has some remarks on the rich old pastures of this Riding, particularly those in the district of Craven, many of which might be broken up for corn, to the advantage of the community; but it is nearly certain, that little or nothing of that sort will be done during the continuance of the tithe system. In the words of the author, "Before any of these rich fields can be broke up, the tithe system must undergo a change; as it would be a notable affair for a tithe-holder to have a tenth of the weighty crops they would produce. From respectable authority, we learned, that the payment of tithes was, in a great measure, the cause of laying these fields totally in grass, and that this tax continues to operate as a prohibitory restriction against breaking them up." A pregnant proof, if proof be wanted, of the incalculable mischiefs of this tax; for a vast treasure of useful industry, and circulation of grain, and other products useful to man, are, by this system, entirely locked up and lost to the community, which might otherwise be brought forward, without any diminution of the stock of cattle maintainable on the same ground. In these seasons of scarcity, bordering on famine, which, if the tithes continue as they are, must be almost periodical, can a warning voice be necessary to rouse to a sense of danger and duty, those who have the power to remedy this abuse?

An observation, in page 118, will excite some surprise—"Clover by itself always makes bad hay:" Now, in many parts of the country, clover is ever esteemed as most valuable fodder, at least for horses, if not for all other cattle.

Chap. 11. *The inclosure of waste and unimproved lands*, is again more particularly recommended; and an excellent Scotish

law for that purpoſe brought forward, which might be of great utility in England.

The remarks on this intereſting ſubject are ſupported by the notes of ſeveral correſpondents; but the chapter is principally occupied by a moſt valuable and circumſtantial paper, communicated by Robert Stockdale, Eſq. on the celebrated incloſures of the foreſt of Knareſborough, ſtating the difficulties attending the diviſion of above 33,000 acres, with a candid and inſtructive account of his own errors, and final ſucceſs, in the cultivation and improvement of a moſt rugged and unpromiſing allotment, which appears to have been of conſiderable extent. This paper may be of infinite uſe to future adventurers in the ſame tract. A note at the end of this chapter ſays, "Great part of the waſte lands call loudly for improvement, by the plough and the ſpade. May the call be obeyed, leſt we *fight*, and *weave*, and *hammer*, till we have not *bread* to eat." How does this, written in 1795, digeſt in 1800.

Chap. 12. *Improvements* are here alluded to, ſuch as drainings, irrigations, paring and burning, liming and warping; all articles of moment. The ſubject of draining is very ſparingly treated: ſome further obſervations on the beſt modes of conducting the works in open and covered drainages, would have been acceptable. Irrigation is recommended in proper ſituations; but it is acknowledged to be an expenſive and difficult work. The paring and burning of all ſwards, indiſcriminately, are not adviſed by the ſurveyors. YOUNG, on the contrary, ſays, it is a moſt beneficial practice in general, as it is found by experiment not to reduce the quantity of ſoil, nor to deteriorate its quality; but, by converting the turf into a manure, inſtead of its being turned down as a nidus for various reptiles, ſo deſtructive to the common roots, &c. it is approved of by him as a ſafe and beneficial practice. In the ſection on *manures*, there is an obſervation, which will not a little ſtartle the cow-keepers, &c. viz. "Dung ought not to be laid upon the graſs fields; which, properly ſown down, will ſufficiently improve themſelves!" To a grower of hay for cows, &c. this would ſeem incomprehenſible; but it is in ſome ſort explained in a note on old meadows, where it is ſaid, "The ſurveyors deteſt this mode of raiſing hay." Nowithſtanding ſome well founded objections to old ſwards in general, meadows of this deſcription will be valuable, while their produce of milk and butter are ſo much in demand as they now are: and while, by good management

management and manure, they can be brought to yield from one to two tons of excellent hay per acre, ſucceeded by fog or after-graſs, worth from 1l. to 3l., the occupier of ſuch meadows ought well to conſider, before the attempt of breaking them up, whether he can, by the plough, increaſe their value, eſpecially where corn-tithes are taken in kind. The rents of theſe lands are, in general, by much the higheſt of any in the Riding. On *Lime*, the theory laid down is perfectly conſiſtent with the reſult of the beſt conducted experiments on that important ſubject; particularly thoſe of Anderſon, Dundonald, and Hunter. It is accordingly treated as a ſtimulus only to other manures, or the remains of animal and vegetable ſubſtances previouſly in the ſoil, but, without the addition of this ſtimulant, perfectly inert and uſeleſs to vegetation: on theſe principles, it is evident much lime is miſapplied, if not thrown away. Many pertinent and judicious hints occur, on the beſt methods of applying lime, well ſupported by facts adduced by correſpondents; and, on the whole, this ſection contains much inſtruction, on ſafe and tried principles.

Several papers on the *warping of land*, as practiſed, for ſome time paſt, in the ſouthern parts of the diſtrict, throw much light on the ſubject, and will be curious and informing to the inhabitants of the northern parts of the county. This operation is a moſt ingenious effort of human induſtry. What wonders would it not perform, if encouraged! what a garden might Britain ſoon be, if permitted! Hundreds of thouſands of acres of land on the coaſts, well adapted to this ſignal mode of improvement, are, to our certain knowledge, loſt to the community, in conſequence of one or other of the obſtacles already inſiſted on.

Chap. 13. Here are ſome notices on the ſoiling of cows and horſes on mown graſs, &c. during the Summer months, a practice highly meritorious; the benefits of which practice are by many ſuppoſed to be more ſtrikingly in favour of working horſes, than even of cows. The ſurveyors ſpeak favourably of the long horned breed of cattle; but many of the moſt attentive breeders in the Weſt Riding, will prefer the Durham, or ſhort horned kind, in moſt ſituations, as producing an animal of better proof, when fattened, more productive in milk, the oxen more fit for labour, and, on the whole, as a race better adapted to the climate, than the formerly ſo much admired Lancaſhire or Craven breed: but it muſt be obſerved, a ſtrong diſtinction is and ought to be

made between the Durham and Holderneſſe ſpecies, which are, in the ſurvey, in ſome degree confounded, or at leaſt not treated as diſtinct breeds. Of ſheep, the ſort moſt valued by the ſuperior improvers, appears to be the new Leiceſterſhire or Diſhley breed.

In Section 3. the merits of *Oxen* for draught are diſcuſſed, and, in our opinion, they are too haſtily decided againſt; for we are confident, from fair experiment, that a good ox will do as much work as a heavy draught horſe, the pride of the modern farmer; and, unleſs he will ſo far conquer his prejudices, as to fatten and eat his heavy horſe when diſabled, the queſtion will not bear a debate. The vaſt increaſe of horſes during the laſt century, is believed, by many, to be among the cauſes, that the comparative ſupply of proviſions for market, has not kept pace with the boaſted agricultural improvements of the ſame period. Section 7. *Dove cots* are ſeverely denounced as nuiſances, proper for extirpation. We allow there may be "too much even of a good thing;" but ſince we know of little or no damage actually done by this beautiful winged ſpecies of live ſtock, except on lodged corn, and at or a little before the harveſt; and as they are of ſome value, beſides leaving an excellent manure; we are not inclined to condemn them to utter extermination, without further inquiry into their alleged demerits. Yet ſome of the remarks on this ſubject may be juſt. Where vaſt numbers are kept, they are doubtleſs nuiſances; of which a ſtrong proof exiſted in France before the Revolution, where the agriculture of whole diſtricts was diſcouraged, if not deſtroyed, by myriads of thoſe birds, preſerved and encouraged, at the expence of the cultivators, by the moſt tyrannous reſtrictions.

Chap. 14. On *Rural Economy*, has ſome notices by a correſpondent in ſect. 1. on the ſubject of *Labourers*, which appear to indicate, that the ſituation of that indiſpenſably uſeful body of men, is rather deteriorated, than otherwiſe, notwithſtanding the improvements of the preſent period. If theſe improvements are conſidered only as properly centering in and ſupporting a ſyſtem of high rents, high rates of proviſions, &c. &c. the majority of the moſt uſeful members of the community cannot have reaſon to join the loud plaudits of thoſe improvements, which we ſo frequently hear echoed and re-echoed from every quarter: And why farmers, in general, ſhould lean more to high rents, &c. than

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to adequate wages of rural labour, is a problem of difficult ſolution, on any fair principles.

Chap. 15. The *Roads* of the diſtrict, though much is done upon them, are, too, generally bad, from the ſoftneſs af the materials, &c. A remark here againſt the uſe of waggons, and in favour of light carts, will not be reliſhed by many, yet poſſibly it may be juſt. Section 3, contains liſts of *Fairs and Market Towns* within the Riding. The reaſoning againſt the "*propoſal of ſome wild imaginations*," that *all* grain ſhould be ſold in the public markets, is perfectly concluſive; indeed, the inſanity of ſuch a propoſal is ſelf-evident.—In Section 4. the leading *Manufactures* of the diſtrict are briefly noticed; and ſome hints occur on the partial occupation of land by manufacturers. We are moſt clearly of the opinion, that, where manufacturers can be accommodated with land in ſmall parcels, for their convenience and relaxation, this mode of occupation is highly advantageous to individuals, and to the community, in every reſpect. In Section 5. on the *Corn Laws*, our ſurveyors juſtly obſerve as follows:—

'From the beginning of this century, to the year 1756, the corn laws were allowed to operate without any ſuſpenſion; but the crop of the above year being rather defective, an act of Parliament was paſſed, whereby exportation was ſtopped during the year 1757. In 1766, upon an application from the Lord Mayor of London, the Privy Council aſſumed the power of iſſuing a proclamation for ſtopping exportation, which was emphatically called by the late Earl of Mansfield, "the forty days tyranny;' and and, ſince the year 1773, the corn laws, like Proteus, have aſſumed ſo many various ſhapes, no regular ſyſtem being adhered to, as to throw the whole trade into confuſion and diſorder.'

Chap. 16. *Miſcellaneous Obſervations.* The following remarks on *Agricultural Societies*, we will extract:—

'As improvements in agriculture very often locally take place, and are ſlow in travelling from one part of the country to another, we ſhould eſteem the inſtitution of ſocieties, upon proper principles, an excellent method for diſſeminating knowledge in this ſcience. If theſe ſocieties were to correſpond with one another, every new improvement, either in cultivation, ſtock, or huſbandry utenſils, that was deviſed in one part of the country, would be immediately

immediately known in its moſt diſtant parts. For want of theſe means of communication at preſent, the great body of farmers are almoſt as ignorant of what their brethren in other counties are doing, as if they lived in a foreign land.

'In conſtituting Agricultural Societies, we are far from recommending an intermixture of proprietors and farmers together. It is abſolutely neceſſary, for many obvious reaſons, they ſhould be ſeparate. Without dwelling upon theſe, it may only be ſaid, that, in preſence of a landlord, ſome farmers are ready to be diffident, and will not propoſe their opinions in that free and unreſtrained manner they would do in the company of their brethren and equals. We heard of the Sheffield ſociety, where gentlemen, clergy, and farmers, met promiſcuouſly; the conſequence of which was, that the latter were in a manner prohibited from mentioning improvements, in caſe they ſhould be a watch-word for the one to increaſe the rent, and the other to raiſe the rate of tithes.'

In regard to the troubleſome and long complained of diverſity of *Weights and Meaſures* in this country, the obſervations here made are judicious, and well deſerving the attention of thoſe who might apply a remedy. It is the decided opinion of the ſurveyors, that corn ought uniformly to be ſold by weight: a number of objections have been made, which are eaſily repelled.

In chap. 17. *Obſtacles to Improvement* are brought forward; very important objects for conſideration. In the firſt place, the ſurveyors ſay, "We account it as demonſtrable as any propoſition in Euclid, that no real improvement can take place in regard to the waſte lands of this diſtrict, without a previous diviſion; and it is nearly as certain, that, without a general law being paſſed at once, for the whole kingdom, their diviſion, according to the preſent ſyſtem, will never be accompliſhed." Here follows the humble petition, at length, of the freeholders, to the lord of a manor in the Weſt Riding, which offers a plain ſtatement of the preſent, almoſt inſuperable, difficulties attending the incloſure of waſtes, &c. ſo imperiouſly demanded by the "*exiſting circumſtances*" of this country. Archdeacon Paley is quoted at ſome length, in corroboration of the remarks of the ſurveyors. The *Tithes* are here alſo briefly mentioned as obſtacles to improvements of almoſt every kind; the difficulties of ſettling which, in incloſures, form the ſtrongeſt barrier againſt

againſt the cultivation of the waſtes. The want of *Leaſes* comes again into view as a ſignal diſcouragement, which is well illuſtrated by a correſpondent, whoſe deſcription of his own caſe muſt excite the ſympathy of every cultivator. The *Limitations* upon *Management*, which obtain in many places, are juſtly conſidered as obſtacles in the way of every experienced improver: for, as here ſtated, the tenant, under ſuch reſtraints, and without a leaſe, is but a ſteward on his farm, if not a *ſlave*. Throughout the whole of the reaſoning on the aſſigning or ſubſetting of land, and the various aſpects of the relation of landlord and tenant, the author appears to point to a degree of independence, on the part of the tenantry, abſolutely incompatible with the actual ſtate of things; for if all the tenants had leaſes, what would become of the influence of landlords, in elections for Parliament, &c. the purity of which we are ſo much intereſted in preſerving? Yet a clauſe in the leaſe might provide againſt this offence; but then other modes of dependence, attaching to tenures at will, ſtand unfortunately in the way of leaſes. The ſmall ſize of farms is alſo mentioned as an hinderance to improvement; and while every little arable farmer muſt have a team of heavy horſes, devouring a great proportion of his produce, there is not a doubt about it, but ſmall graſs farms are much wanted in many parts of the Riding, for which there is every encouragement, from the conſtant high price of their products, and the conſequent high rate of the rental.

Chap. 18. is on the *Means of Improvement*, which we introduce in the author's own words:

"Agriculture is the parent of all the arts, and the practice of it may be conſidered as a ſtandard for the flouriſhing of others. It has, for ſome years paſt, been a principal object in the ſeveral governments of Europe, to frame laws and regulations for its encouragement; and the eſtabliſhment of a Board for promoting Agriculture and internal improvement, ſhews it is not neglected in our own country. We have, in the foregoing parts of this work, ſubmitted to the conſideration of that Honourable Board a ſtate of the huſbandry in this Riding: and alſo pointed out, for their information, the principal obſtacles which are in the way of further improvements: We now proceed to ſuggeſt how theſe obſtacles may be removed, and what alterations ought to be introduced into the huſbandry of the diſtrict.

"The

" The improvements we ſuggeſt are:

" 1*ſt*, That the nature of the connexion betwixt the landlord and the tenant ſhould be changed, and leaſes of a proper duration granted.

" 2*dly*, That the arbitrary and injudicious covenants generally impoſed upon the tenantry, ſhould be diſcontinued, and conditions, more favourable to improvements, ſubſtituted in their ſtead.

" 3*dly*, That tithes ſhould be commuted.

" 4*thly*, That a general bill ſhould be paſſed by the Legiſlature, for the diviſion of the common fields and waſte grounds.

" Theſe are the leading means of improvement; without which no material encouragement can be given to the huſbandry of the diſtrict. In hopes that the Board of Agriculture will conſider them in the ſame light, we proceed to recommend,

" 5*thly*, More improved rotations of crops.

" 6*thly*, Breaking up the old paſture fields, and frequent changes of corn and graſs.

" 7*thly*, Drilling and horſe-hoeing beans and turnips.

" 8*thly*, Planting the waſte lands which are improper for cultivation."

Under the head of more improved rotations of crops, after having premiſed a variety of intereſting particulars, indiſpenſible to the management of a good farm, ſome valuable hints are offered on the beſt mode of cultivating land, and raiſing crops on different ſoils.

The drilling and horſe-hoeing of *Beans* and *Turnips*, and thoſe crops only, is ſtrongly recommended as a real improvement. On planting certain parts of the waſtes, it is obſerved that it ought to be " a material object with every well regulated government, that no part of its territory be allowed to remain unproductive, but that every acre of it ſhould be employed to ſome uſeful purpoſe or other. If the ſoil is the capital ſtock of the country, as ſeveral political writers have maintained, the intereſt of the country is neglected when any part of it is allowed to lie in a ſtate of ſterility.

ſterility. There is no part of the earth but what may be adapted to ſome uſeful purpoſe or other; and, as there is a conſtant demand for wood in the Weſt Riding, the proprietors are called upon, both by public and private motives, to plant every acre, not capable of being improved by the ordinary methods of cultivation."

The *Game Laws* are noticed, and the privilege of hunting is thus feelingly commented on:

"It really ſhocks the feelings of a farmer, to notice the injuries committed by a parcel of people, mounted on horſeback, galloping like madmen after a poor fox, or an innocent hare. We are convinced, that no *real* gentleman will injure the property of the farmer, when engaged in this *diverſion*: but, ſo it happens, that heavy loſſes are often ſuſtained by thoſe over whoſe fields the object of ſport happens to run; fences are tumbled down, the ſown wheat fields rode over, the young graſſes not ſpared; and, in ſhort, every thing muſt make way for theſe ſons of Nimrod."

Theſe remarks ought to engage the attention of the preſent ſupporters of thoſe purſuits, more appropriate to a ſavage and uncultivated ſtate of mankind.

Having now carefully reviewed the various parts of this intereſting ſurvey, we give the concluſion of it in our author's own words:

"We ſhall now bring this ſurvey to a concluſion. In the courſe of it, we have endeavoured to deſcribe the ſtate of huſbandry in the Weſt Riding, as it is actually carried on; and this we have done, not only from a minute examination of its different branches, and the information collected during the time we remained in the Riding, but alſo for the very liberal communications of ſeveral intelligent gentlemen and farmers, ſince tranſmitted to us. It certainly has given us much pain to be under the neceſſity of cenſuring ſeveral prevailing practices, and to ſay ſo much againſt the nature of the connexion which at preſent generally ſubſiſts betwixt the proprietors and their tenants. Upon theſe matters, we have ſtated our ſentiments with freedom, becauſe we are ſenſible of their importance; and have uniformly acted upon this maxim, that "thoſe who are afraid of the public, are not the men by whom the public is to be ſerved."

"With regard to the intereſt of that uſeful body of men the farmers, we have endeavoured to ſhow how much their ſituation would be meliorated, and the practice of agriculture improved, by the proprietors granting leaſes of a proper duration, free

free of thoſe uſeleſs reſtrictions and covenants that now ſubſiſt in agreements for land, whether annual, or for a greater number of years.

"Theſe things we humbly ſubmit to the conſideration of the Board of Agriculture; and we entertain a ſanguine hope, if the improvements we have ſuggeſted are ſanctioned by their approbation, that this ſanction will have great influence in correcting the abuſes we have deſcribed, and contribute to improve the huſbandry of the Weſt Riding of Yorkſhire; by which means the intereſt of the landed proprietor will be augmented, the peace and happineſs of the farmer increaſed, and conſequently the public good materially promoted.

There is a copious Appendix to the volume, of which No. 1. contains 49 pages of extracts from the journals kept during the ſurvey, which forms a very proper, uſeful, and amuſing addition to the work; and the facts obſerved during the tour through the Riding, afford comments corroborative of the principles laid down in the ſurvey. No. 7. exhibits a curious, but melancholy picture; a ſtatement of the waſte lands in Yorkſhire, calculated by John Tuke, land-ſurveyor, by which it appears they amount to 849,272 acres, of which 405,272 acres are in the Weſt Riding alone; being above one-fourth of the whole ſurface of the diſtrict. Moſt of theſe lands are now exiſting as nuiſances; while this country has been for many years importing grain to a very large amount; while, in ſome of thoſe years, the common products of our ſoil, the abſolute neceſſaries of life, have been ſcarcely acquirable by the lower claſſes; and while even ſeveral awful warnings of famine have been given. May theſe warnings have their effect, in calling forth the utmoſt efforts of thoſe who have the power to remove every obſtacle to the extenſion of our agriculture, and the conſequent increaſe of the ſtock of the neceſſaries to human exiſtence, before it be too late; for by no other means can even property itſelf remain ſecure, notwithſtanding the objections of the half-learned ones in this important branch of political economy. No. 9. is an account of the different townſhips in the Wapentake of Claro; a ſimilar account of the whole Riding would have been acceptable; it includes a ſhort ſketch of the actual management of the proprietors, &c, in each place. No. 10. and laſt, gives ſtatiſtical information reſpecting many pariſhes in the Riding, which appear to have been gathered from the replies to the queries ſent ſome years ſince to the clergy of the different pariſhes.

We

We have here an eſtimate of the number of acres in each pariſh, of their various application to corn, graſs, &c.; courſes of crops, and number of inhabitants. Theſe may furniſh moſt uſeful and intereſting documents for future obſervers on the ſtate of this important diſtrict.

On the whole, this General View of the Agriculture of the Weſt Riding of Yorkſhire—for diligent reſearch, candour and liberality, in the ſelection of matter from correſpondents, as well as in the imparting of advice and opinion; for the able and maſterly manner in which the account is drawn up, and, above all, for the ſound and practical knowledge pervading the whole work—merits the warmeſt acknowledgments of the inhabitants of that diſtrict in particular, and will obtain a diſtinguiſhed place among the ſurveys of the other counties. We conclude our review of this article, with lamenting, that the Board of Agriculture ſhould have reſtricted the ſurveyors, generally, from the diſcuſſion of the ſubject of *tithes*, in compariſon with which, every other obſtacle to the agricultural improvement of this country, is but as a *molehill to a mountain*.

W. P.

Travels through the United States of North America, by the Duke de la Rochefoucault Liancourt, *Vol.* 2. 686 *pages*, 4*to*. London, *Philips*, &c. 1799.

A considerable part of this volume is devoted to a deſcription of the conſtitution, government, laws, commerce, and manners, of the United States; which ſubjects are foreign to the general purpoſes of this work: But wherever the noble author enters upon agricultural details, we diſcern the ſame propriety of deſcription, and juſtice of remark, as were ſtrikingly diſplayed in the firſt part of this valuable and important work.

We lament ſincerely that our limits preclude us from examining ſuch an intereſting publication with that minuteneſs which it deſerves. We ſhall therefore confine ourſelves to a brief ſketch of the different routes taken by his Grace, extract one or two paſſages illuſtrative of American huſbandry, and conclude with a few remarks upon the preſent ſtate of rural economy in the United States.

After

After a moſt diſagreeable and dangerous paſſage from Charleſtown in South Carolina, the Duke de Liancourt landed at Norfolk in Virginia, where a conſiderable trade is carried on with Europe, the Antilles, and the Northern States. Agriculture can hardly be ſaid to exiſt in the neighbourhood of Norfolk, and, with a few exceptions, is imperfectly practiſed throughout the whole of this extenſive State. Having viſited the moſt diſtant parts of Virginia, his Grace croſſed the Potoumack, and entered into Maryland, which appears rather worſe cultivated than the former State.

The ſecond tour is to the Northern States; and his Grace travelled in the ſtage from Philadelphia to New-York, where, in company with his old fellow-traveller Mr Guillemard, he took ſhipping for Providence, in Rhode Iſland. Being, by an adverſe wind, forced into Stonington, State of Connecticut, he examined the huſbandry of the neighbourhood, which is chiefly confined to paſturage and rearing young cattle. Afterwards they paſſed to Newport and Boſton—paid a ſecond viſit to General Knox at Thomaſtown, in the diſtrict of Maine, whoſe extenſive undertakings are amply detailed. Returning to Boſton by water, his Grace proceeded to Portſmouth, in New Hampſhire, and gives a comprehenſive account of the conſtitution, laws, and commerce of that province.

Viſiting Boſton a third time, the Duke journeyed through the inland parts of Maſſachuſets, of which the deſcription is generally very favourable. He entered the State of New York, about nine miles from Stockbridge; and, after examining the lands upon the ſide of Hudſon's river, and giving a particular account of the eſtate of Major Prevoſt, ſon of General Prevoſt, who commanded at Savannah when that place was beſieged by Count d'Eſtaing, he arrived at New York, which concludes the ſecond tour.

His Grace, on the 26th March 1799, ſet out on his third tour, the object of which was to viſit the Federal city, henceforth deſtined to be the ſeat of government. Paſſing the Schuylkill, he travelled by Cheſter and Wilmington to Brandywine, where from 60 to 80 mills are erected, chiefly for the manufacture of paper, gun powder, and flour. The conſtitution and laws of the Delaware ſtate is next deſcribed; and, after making ſome obſervations upon Lower Maryland, he croſſed Cheſapeak-bay, and arrived at Annapolis.

Federal City, the ſite of which extends three miles along the banks of the Potoumack, including 4120 ſquare acres, from

from the accounts here given, appears to have been planned out upon too expenſive a ſcale for the circumſtances of the country; to the proſperity of which, the ſinking ſuch an immenſe ſum of money upon non-productive works, was certainly a matter of the utmoſt magnitude. In the execution of the deſign, a groſs error ſeems to have been committed, by erecting buildings in all the different quarters at once, without finiſhing any thing like a ſtreet, or diſpoſing of the lots as buildings for the accommodation of the inhabitants were required. Ruinous ſpeculations were the certain conſequence; and by far too much of the capital ſtock of America has been unneceſſarily expended, in erecting what is meant in future to be their capital city. His Grace's obſervations on theſe matters are ſo juſt, that we recommend them to the attention of our readers. It appears, however, from a late motion in the American Senate, that he has erred in his prediction, that government would not remove to this place at the time fixed by the original law in 1790.

Leaving Federal City, the Duke paſſed on to Baltimore, which has increaſed prodigiouſly ſince the peace in 1783, and is now the third commercial town in America. Croſſing the Suſquehannah, he arrived at Elktown, and from thence proceeded to Philadelphia.

A very full and liberal account of the State of Pennſylvania is next given, which is well worth the peruſal of every perſon who takes intereſt in the welfare of mankind.

The fourth tour is through part of Pennſylvania and States of New Jerſey. A hiſtory of the colony of New York is preſented, which is followed by an intereſting account of its preſent conſtitution, trade, finances, manners, &c. A variety of general obſervations on the United States conclude the work.

We ſhall now extract two paſſages, which will throw conſiderable light upon American huſbandry.

Speaking of Mr Jefferſon's eſtate at Monticello, in the chain of mountains which ſtretches from James's river to the Rapahannock, his Grace ſays:

"Mr Jefferſon has divided all his land under culture into four farms, and every farm into ſeven fields of forty acres. Each farm conſiſts, therefore, of two hundred and eighty acres. His ſyſtem of rotation embraces ſeven years; and this is the reaſon why each farm has been divided into ſeven fields. In the firſt of theſe ſeven years, wheat is cultivated; in the ſecond, Indian corn; in the

third, peas or potatoes; in the fourth, vetches: in the fifth, wheat; and, in the ſixth and ſeventh, clover. Thus, each of his fields yields ſome produce every year; and his rotation of ſucceſſive culture, while it prepares the ſoil for the following crop, increaſes its produce. The abundance of clover, potatoes, peas, &c. will enable him to keep ſufficient cattle for manuring his land, which at preſent receives hardly any dung at all: independently of the great profit which he will in future derive from the ſale of his cattle.

"Each farm, under the direction of a particular ſteward or bailiff, is cultivated by four negroes, four negreſſes, four oxen, and four horſes. The bailiffs, who in general manage their farms ſeparately, aſſiſt each other during the harveſt, as well as at any other time, when there is any preſſing labour. The great declivity of the fields, which would render it extremely troubleſome and tedious to carry the produce, even of each farm, to one common central point, has induced Mr Jefferſon to conſtruct, on each field, a barn, ſufficiently capacious to hold its produce in grain. The produce in forage is alſo houſed there; but this is generally ſo great, that it becomes neceſſary to make ſtacks near the barns. The latter are conſtructed of trunks of trees, and the floors are boarded. The foreſts and ſlaves reduce the expence of theſe buildings to a mere trifle.

"Mr Jefferſon poſſeſſes one of thoſe excellent threſhing machines, which, a few years ſince, were invented in Scotland, and are already very common in England. This machine, the whole of which does not weigh two thouſand pounds, is conveyed from one barn to another in a waggon, and threſhes from one hundred and twenty, to one hundred and fifty buſhels a day. A worm, whoſe eggs are almoſt conſtantly depoſited in the ear of the grain, renders it neceſſary to threſh the corn a ſhort time after the harveſt. In this caſe, the heat, occaſioned by the mixture of grain with its envelope, from which it is diſengaged, but with which it continues mixed, deſtroys the vital principle of the egg, and protects the corn from the inconveniences of its being hatched. If the grain continued in the ears, without being ſpeedily beaten, it would be deſtroyed by the worm, which would be excluded from the eggs. This ſcourge, however, ſpreads no farther northwards than the Potowmack, and is bounded to the weſt by the Blue Mountains. A few weeks after the corn has been beaten, it is free from all danger, winnowed, and ſent to market. The Virginia planters have generally their corn trodden out by horſes; but this way is ſlow, and there is no country in the world where this operation requires more diſpatch than in this part of Virginia: Beſides, the ſtraw is bruiſed by the treading

treading of horſes. Mr Jefferſon hopes that his machine, which has already found ſome imitators among his neighbours, will be generally adopted in Virginia. In a country where all the inhabitants poſſeſs plenty of wood, this machine may be made at a very trifling expence."

The following bears much affinity to the deſcription of an old Engliſh townſhip:

"Stockbridge is one of the richeſt townſhips in the ſtate of Maſſachuſets. All its land is cultivated, except a very ſmall portion, which will ſoon, in its turn, receive culture like the reſt. No timber is here preſerved beyond what is requiſite for fuel. This townſhip is, for the moſt part, ſituate in a valley, but extends alſo upon ſome hills of no great elevation. The ſoil is excellent, and almoſt all laid down in meadow. The cattle, butter, cheeſe, and ſuch other productions as are not conſumed on the ſpot, are generally ſent to New York. Sometimes the certainty of obtaining a higher price at Boſton, induces the farmer to give a preference to the latter place; with which, however, the communication is difficult, becauſe of the diſtance, and of the mountainous country that is to be traverſed. In ſuch caſes, all the other articles, except the cattle, are ſent down to New York by the North River, which paſſes within twenty miles of Stockbridge, and tranſported from New York to Boſton by ſea."

We ſhall now offer one or two remarks upon the preſent ſtate of rural economy in the United States.

A line of diſtinction may be drawn betwixt thoſe ſtates commonly called Southern and Northern ones. In all the northern ones, property is more divided, the land better cultivated, and population generally more extenſive, upon an equal ſpace of ground. In the ſouthern ſtates, a great proportion of the inhabitants are ſlaves, which neceſſarily renders the ſyſtem of cultivation materially different. The northern ſtates appear to poſſeſs more of the comforts of life, and are much farther advanced in agricultural ſcience, particularly Connecticut and Maſſachuſets, than the ſouthern ſtates of Virginia, Maryland, Caroline, and Georgia, where a few individuals may be richer; but the great bulk of the people are dependent, ignorant, and uncivilized. In Virginia and Maryland, a change is rapidly taking place in the mode of huſbandry; for tobacco is yielding to wheat, which aſſuredly is a beneficial change; but it has given us much ſurpriſe to obſerve, that the crops of that grain are, upon the whole, very inſignificant, while the expence of cultivation is ſo great.

Very little attention ſeems to be paid to the important article of manure, which in general is too much neglected in the American States, and is a ſure proof that agricultural ſcience is but in its infancy.

It may be added, that the rate of labour will, for a long while, effectually preclude grain from being an article of export to Europe, unleſs in years of ſcarcity, when prices are neceſſarily much higher than uſual. The medium price of Wheat in Virginia and Maryland, appears to be higher than it commonly is in Britain, even under the trifling value of land, which only will advance as population increaſes, and improvements are made.

We ſhall now finiſh our account of this highly intereſting and important work, by expreſſing the deep ſenſe we entertain of the noble author's laborious exertions, in collecting ſuch a maſs of information concerning the civil, political, commercial, and agricultural ſtate of a country which promiſes, at no diſtant period, to rival old European governments in the arts and ſciences, and in every article of polity advantageous to mankind. The information, copiouſly and judiciouſly given, will be of material uſe to thoſe who may afterwards viſit America, and inſtructive to every one intereſted in the welfare of ſociety in theſe flouriſhing and well-regulated States. N.

Remarks on the Cauſe and Progreſs of the Scarcity and Dearneſs of Cattle, Swine, Cheeſe, &c. &c., and of the articles of Tallow, Candles, and Soap; pointing out divers modes for remedy, and to prevent ſuch calamity in future. Being the reſult of great experience, acquired by dealing at Fairs, Markets, &c. during the laſt thirty-ſeven years. Humbly dedicated to the Prime Miniſter of England, in behalf of the Community at large, more or leſs intereſted therein. Together with Hints for the conſideration of perſons having landed groperty, and dealers in cattle. 234 *pages*, 8vo. *By* J. MATTHEWS. *London, printed for the Author; ſold by* Scarlet, &c. *Price* 6s.

THIS elaborate title-page excited our curioſity; and we entered upon the work, under the ſanguine expectation of receiving

receiving ſatisfactory information concerning the important matters therein mentioned; but we confeſs that we have been utterly diſappointed. This deſultory and eccentric writer only tells us, that prices of beef, mutton, &c. are greatly increaſed ſince 1760, when he commenced buſineſs; a thing we are already practically acquainted with. The cauſe of this, he attributes to the great number of calves and lambs which are now killed; and ſuggeſts no other remedy than to prohibit ſuch practices, which he thinks would render the market for cattle and ſheep as plentiful and cheap as formerly.

Hark ye, Mr Matthews! do you ſuppoſe, when luxury is ſo vaſtly increaſed, that the like quantity of proviſions will ſatisfy the national conſumption, as was ſufficient in the year 1760, when you opened ſhop at Bath? Or do you think that a pound weight of beef and mutton can be ſold at the price then current, ſeeing that rent, labour, and public burdens, are now doubled? Let us try the queſtion by the price prefixed to your book. In 1760, a bookſeller would have been well paid with three ſhillings for 234 pages octavo; and yet you modeſtly demand double that ſum for a work of equal ſize. If a page of print has riſen in price, why ſhould not a pound of beef riſe alſo?

The work is dedicated to Mr Pitt, who is repreſented "to have had greater embaraſſments to encounter, owing to great fallings off of income to the revenue, and perhaps greater outgoings, occaſioned by ſcarcity and dearneſs of cattle, than any of his predeceſſors." And, in the body of the work, p. 161. thoſe in power are fervently exhorted, *if they poſſeſs Chriſtian charity, to attend to the next calving ſeaſon!!!*

General View of the Agriculture of the County of Northumberland, with Observations on the Means of its Improvement. Drawn up for the consideration of the Board of Agriculture, by J. BAILEY *and* G. CULLEY. 209 pages 8vo. *Sold by Messrs* Robinson *and* G. Nicol, *London*; Bell, *Newcastle*; *and* Symington, *Edinburgh*.

THIS work is chiefly of a practical nature; and proceeding from two ſuch eminent agriculturiſts as Meſſrs Bailey

and Culley, who are juſtly ranked at the head of the profeſſion, deſerves minute conſideration.

Northumberland is a diſtrict of great extent, containing 1,267,200 acres; whereof nearly one-third is ſtated as improper for tillage. Of the cultivatable land, 800,000 acres are ſuppoſed worth 14s. *per* acre, and 450,000 acres at 2s., which gives an annual value of 605,000l. Sterling. The climate, in regard to temperature, is ſubject to much variation; and the prevailing ſoil is moiſt loam, accompanied with a portion of the ſeveral varieties which are to be found in this iſland.

Minerals conſtitute an important feature in the deſcription of this county; and perhaps working the ſubſoil in ſuch an extenſive manner, has contributed more to the improvement of the ſurface, than any other circumſtance. An increaſed population is the neceſſary conſequence of theſe ſubterraneous improvements, which augments the demand for every article of rural produce. This ſtimulates the activity of thoſe employed in field-labour, raiſes the rate of rents, and, in ſhort, occaſions an influx of wealth among the inhabitants of all deſcriptions, greater than could have ariſen from the moſt flouriſhing manufacture.

The export of coals from Newcaſtle, appears to have increaſed nearly one half ſince 1772; the quantity ſhipped in 1795 being 505,650 chaldrons, or above 950,000 chaldrons, according to the London meaſure. The value of a chaldron, in the firſt inſtance, is 15s.; the charges of putting aboard are 2s. 3d. The duties, inſurance, &c. amount to about 22s. 3d.; and the freight and profit to the ſhipper, may be eſtimated at 23s. Theſe ſeveral ſums, except about 12s. per chaldron of duties, &c. are circulated in the neighbourhood, and prove the immenſe benefit of the coal-trade to the county of Northumberland.

The following extracts throw much light upon a queſtion often agitated, viz. *Whether the Britiſh collieries are inexhauſtible?*

"It has been aſſerted, 'That *the coals in this county are inexhauſtible.*'—Mr Williams, in his Natural Hiſtory of the Mineral Kingdom, is of a different opinion, and thinks it a matter of ſuch importance, as to deſerve the ſerious attention of the Legiſlature. Towards elucidating this point, it may be of ſome uſe to eſtimate what number of acres are wrought yearly in this county, to ſupply the above quantity of coals. In order to accompliſh this object,

ject, the thickneſs and number of workable ſeams of coal muſt be firſt aſcertained; for which purpoſe, we have been favoured with ſections exhibiting the thickneſs and depth of the various ſtrata, in ſome of the deepeſt pits in the county; which will not only be uſeful for the preſent purpoſe, but we hope will be acceptable to many of our readers who are curious in reſearches of ſubterranean geography.

At St Anthon's colliery, (three miles eaſt of Newcaſtle) the different ſeams are as follow;

Seam.	*Thickneſs of each ſeam.* Ft. In.		*Depth to each ſeam.* Yds. Ft. In.
1. Coal	0 6	—	34 0 6
2. Ditto	0 8	—	44 1 2
3. Ditto	0 6	—	66 1 8
4. Ditto	1 0	—	82 2 2
5. Ditto	0 6	—	94 0 8
6. Ditto	0 8	—	101 2 4
7. Ditto	0 8	—	108 1 0
8. Ditto	1 0	—	128 0 0
9. High Main Coal	6 0	—	152 0 0
10. Coal	3 0	—	193 0 5
11. Ditto	0 6	—	200 2 2
12. Ditto	1 6	—	219 2 5
13. Ditto	3 3	—	247 0 2
14. Ditto	3 2	—	256 2 8
15. Ditto	0 9	—	258 1 5
16. Low Main Coal	6 6	—	270 1 8

In the above pit or ſhaft, which is nearly the deepeſt in the kingdom, there are no leſs than ſixteen ſeams of coal. But many of theſe, from their thinneſs, are not workable. The 9th, called the *high main coal*, and the 16th, the *low main coal*, are the two principal ſeams for affording quantities of coal, being altogether 12¾ feet thick, and are thoſe moſt generally wrought. But the 10th, 13th, and 14th, are all workable ſeams, and will afford conſiderable quantities of coal; the aggregate of the three making nearly 9¾ feet thick; ſo that the total thickneſs of the workable ſeams in this colliery amount to 22 feet.

In Montague Main colliery, (three miles weſt of Newcaſtle), the different ſeams of coal are as follow:—

Seams.	*Thickneſs of each ſeam.* Ft.	In.		*Depth to each ſeam.* Yds.	Ft.	In.
1. Coal.	0	4	—	5	2	0
2. Ditto	0	6	—	44	1	0
3. Ditto	0	9	—	63	2	9
4. Benwell Main	5	3	—	69	1	10
5. Coal	1	0	—	79	2	10
6. Ditto	0	8	—	133	1	6
7. Ditto	3	4	—	137	1	10
8. Ditto	1	6	—	143	1	3
9. Ditto	1	3	—	147	2	2
10. Ditto	0	8	—	162	2	6
11. Low Main Coal	2	11	—	176	0	4
12. Lower Main Coal	2	10	—	199	2	10
13. Coal	0	6	—	226	0	10
14. Ditto	0	5	—	233	1	5
15. Ditto	0	3	—	241	1	10

In this ſhaft, there are fifteen ſeams of coal, of which only four are workable; viz. 4th, 7th, 11th, and 12th, making together 4 yds. 1 ft. 7 in. of workable coal. If the medium be taken betwixt this and St Anthon's, it will be nearly 6 yards thick of workable coal, from which may be formed,

A Calculation of the quantity of coal in an acre of ground, ſuppoſing the aggregate thickneſs of the various ſeams amount to ſix yards.

An acre of ground contains - 4840 ſquare yards;
which, multiplied by the thickneſs, 6 yards,

gives - - - 29,049 cubic yards in an acre.

From which deduct one third for waſte, and the part or pillars neceſſary to be left in working, - - 9680

there remains - - 19,360 cubic yards to be wrought.

And, as three cubic yards of coal, when wrought, affords a Newcaſtle chaldron,

therefore 19,360 / divided by 3 } gives 6,453 Newcaſtle chaldrons per acre.

The

The coals exported yearly from the rivers Tyne and Wear, with Hartly and Blythe, amount to about 825,000 chaldrons, which, with the home conſumption of the two counties of Northumberland and Durham, will make the quantity of coals raiſed yearly about 1,000,000 chaldrons.

And the chaldrons raiſed yearly 1,000,000 / divided by the chaldrons per acre 6453 } gives 155 acres nearly per year, cleared of coal 6 yards thick.

And, by eſtimating the breadth occupied by the caking coals to be on an average 8 miles broad, and 25 miles long, in the two counties, we ſhall find there will be about 200 ſquare miles, or 128,000 acres, of coals proper for exportation.

Then the whole area 128,000 / Divided by the yearly conſumption, 155 } gives 825 years, the time before this ſpace will be wrought out.

But there are ſome reaſons to think that a thickneſs of ſeam, equal to 6 yards, will not be obtained over an extent of 200 ſquare miles; probably not more, on an average, than 4 yards; in which caſe, the coal will be exhauſted in 550 years: And if the aggregate thickneſs of the ſeams to be obtained ſhould prove only 3 yards, then little more than 400 years will be the term of continuance; but it is probable, that, before the half of that time be elapſed, the price to the conſumer will be conſiderably increaſed, from the increaſed expence of obtaining them, and the increaſed length of carriage from the pits to the river. This laſt, we preſume, may be reduced, in ſome ſituations, by adopting canals in ſtead of waggon ways, which, we have often wondered, have never yet been attempted.

From the above inveſtigation, it appears that Mr Williams's apprehenſions are not ſo chimerical as have been repreſented: How far it might be right for the Legiſlature to interfere, we leave to the conſideration of thoſe more converſant in political ſpeculations.'

The *State of Property* is elucidated in the ſecond chapter; and, though leſs is ſaid on the ſubject than we could have wiſhed, yet the juſt ſentiments expreſſed deſerve the utmoſt praiſe. The candour and diſcernment of the ſurveyors are ſtrongly exemplified in the following paſſages:

'There are probably few parts of the kingdom where eſtates have made ſuch rapid improvements as in this country; there being ſeveral inſtances of the value being more than trebled within the laſt forty years. Many cauſes have certainly been aiding to produce

produce this effect; but the principal one is attributed to letting large farms on leaſes for twenty-one years; by which means the tenants of capitals were encouraged to make thoſe great exertions, from which ſuch advantages have reſulted, not only to themſelves and proprietors of the land, but to the community at large, from the very increaſed produce, and ſuperiority of its quality.

'The uſual mode of letting farms is, to fix a rent under certain conditions and covenants, ſix or twelve months before the expiration of the leaſe; but, upon one of the largeſt eſtates in the county *, the tenants have an offer of their farms two and a half or three *years* before the expiration of the leaſe, which is a mutual benefit to both landlord and tenant; and is attended with ſo many advantages, that it is in a fair way of being generally adopted.

'On ſome eſtates, the practice of letting farms by *ſecret propoſals*, is ſtill in uſe. This is a dark and myſterious mode, which frequently defeats the end it is intended to accompliſh; and inſtead of obtaining an *exceſſive high rent*, the prize has often been gained at a *very inferior value*; and, in the language of the turf, (where only one has entered the liſts), 'by walking the courſe.' And we have known ſome of the firſt farmers in the county forego their farms, rather than ſubmit to contend in the dark.'

It has been a queſtion with ſpeculative agriculturiſts, whether large or ſmall farms were moſt conducive to improvement, though, in our opinion, if facts were only adduced, the queſtion would hardly bear a diſpute. We are extremely glad to obſerve, in this work, indiſputable inſtances of the utility of large farms; and we believe, that if the condition of other diſtricts was impartially inveſtigated, the reſult would be exactly ſimilar to what is here ably ſtated:

'The ſize of farms varies conſiderably in this county; in Gleſdale and Bamborough wards, the farms are large, from 500l. to 1500l. a year; very few under 100l. In the other parts of the county they are from 50l. to 300l. a year. Some tenants in the northern parts of the county, farm from 2000l. to 4000l. a year, and upwards. The capitals neceſſary for ſuch farms entitle them to a good education, and give them a ſpirit of independence and enterprize, that is rarely found amongſt the occupiers of ſmall farms and ſhort leaſes. Their minds being open to conviction, they are ready to try new experiments, and adopt every beneficial improvement that can be learnt in other diſtricts; for this purpoſe, many of them have traverſed the moſt diſtant parts of the kingdom,

* The Earl of Tankerville.

dom, to obtain agricultural knowledge, and have tranſplanted every practice they thought ſuperior to thoſe they were acquainted with, or that could be advantageouſly purſued in their own ſituation: And ſcarcely a year paſſes, without ſome of them making extenſive agricultural tours, for the ſole purpoſe of examining the modes of culture, of purchaſing or hiring the moſt improved breeds of ſtock, and ſeeing the operations of new invented and moſt uſeful implements.'

'The character of a farmer is here ſo reſpectable, that gentlemen, who poſſeſs landed property from 500l. to 1500l. a year, think it no debaſement to follow the profeſſion; and ſo high a name have many of the farmers obtained, for their ſuperior knowledge in rural affairs, that they are ſeldom without pupils from various and diſtant parts of the kingdom, with whom they have very handſome premiums *. Amongſt the preſent pupils may be reckoned the ſon of an earl, and the ſon of a baronet;—who, from their abilities, attention, and anxious readineſs to learn and work at every operation, we hope will do credit to the profeſſion, and render the moſt eſſential ſervices to their reſpective diſtricts.'

We have ſeveral objections againſt the *heads of a leaſe*, preſented p. 32. as being beſt calculated for promoting improvement and the benefit of landlord than tenant. Theſe we ſhall ſhortly enumerate. It is with diffidence we differ in opinion with ſuch experienced agriculturiſts.

1ſt, We do not think it equitable to ſubject the tenant to the payment of all taxes, ſeeing that the burden is neceſſarily variable, and cannot be aſcertained at the commencement of the leaſe. *2dly*, The prohibition againſt ſelling hay, is rather a hardſhip, in particular caſes, upon the tenant, and detrimental to the public; for, under ſuch a covenant, how are innkeepers, and others unprovided with land, to be ſupplied with this neceſſary article? *3dly*, We are clearly of opinion, that reſtraining the tenant from ſowing flax, would be highly prejudicial to the manufacturing intereſt of the kingdom; for, if the covenant was univerſal, foreign flax would, in every caſe, be required, which would occaſion a large ſum of money to be annually loſt to the country. By ſowing at leaſt a ſmall quantity for farm ſervants and cottagers, the public intereſt is much promoted, as thoſe people work up the produce at their leiſure hours, which is a conſiderable national ſaving. *4thly*, The clauſe obliging the out-going tenant to thraſh his laſt crop

* Generally 100l. per annum.

crop *in an uniform manner*, is ſo far right; but, when it is added, "*and to deliver a daily ſupply of ſtraw to the next tenant*," it goes beyond what is practicable, when thraſhing-machines are generally introduced; and might ſubject the way-going tenant to much inconvenience, eſpecially if his ſucceſſor was of a troubleſome diſpoſition. We know ſeveral inſtances of way-going tenants being diſpoſed to thraſh out their crop in an irregular manner; but, upon application to the Judge Ordinary (the Sheriff of the county), every ſuch attempt has immediately been interdicted. The firſt part of the clauſe, therefore, in our humble opinion, is quite ſufficient; the addition would only lay a foundation for diſputes, which too often happen betwixt the parties. 5*thly*, The covenant reſpecting the application of lime, appears looſely worded, and would give room for diſpute. If the tenant is to be ſole judge, *where or when it was neceſſary* to apply lime, the clauſe is unneceſſary. If he is not the judge, but muſt either beſtow the quantity ſpecified in his leaſe, or adopt the alternative of uſing ſo much dung in its place, then a burden is impoſed upon him, which may prove of no advantage to the land; a previous clauſe having already declared, that the dung could not be carried off the premiſes. It rather gives us ſurpriſe to notice ſuch judicious cultivators indirectly recommending the uſe of calcareous manures each time the land is Summer-fallowed, or under fallowed-crops.

We have, in former reviews, expreſſed our diſapprobation of the ſection of *expence* and *profit*, which we judged improper ſubjects for public diſcuſſion; and the more we conſider the matter, the more our original ideas are confirmed. It is obvious, that ſcarcely any two farms are cultivated at the ſame rate of expence; and that the profits are regulated by a number of circumſtances which can hardly be celebrated.

The expence of a farm under the rotation of three years arable, and three years graſs, is ſtated to be 12l. 3s. 6d. for ſix years, independent of rent, and the ſupport of the farmer's family; the produce, for the ſame time, is taken at 20l.; which leaves a balance of 7l. 16s. 6d., or 1l. 6s. 1d. per acre *per annum*. We apprehend that this ſtatement is materially erroneous; and that, under the preſent rate of rents, public burthens, value of labour, and increaſed expence of living, no farmer could carry on his buſineſs upon ſuch terms. It does not preſent the higheſt character of Northumberland huſband-

dry, that the value of the produce ſhould not much exceed what is paid for rent in ſome other diſtricts.

We confeſs we are not fond of analyzing the different calculations upon which the above balance is founded; becauſe the gentlemen who offer them are undoubtedly better qualified to judge of their correctneſs, than we who reſide at a diſtance, and are unacquainted with the rate of Northumberland markets. Still we muſt remark, that neither oats nor barley, under exiſting circumſtances, can be raiſed by a farmer at the prices mentioned. Twenty years ago, ſuch a ſcale might have been juſt; but, at this time, the farmer is not able to diſpoſe of his produce, *during the currency of a lease*, at theſe low prices; though it may happen, that, during a particular year, when markets are low, he may only receive the value which is ſtated.

The decreaſed value of graſs land, from ſuffering it to remain three years unploughed, is obvious, from what is ſtated in p. 36, and is nearly agreeable to what we have uniformly found to be the caſe in our practice. Thirty-three per cent. loſs the ſecond year, and double that ſum the third year, are good arguments for breaking it up at an earlier period; though the ſurveyors, in another part of the work, aſſign ſtrong reaſons for the exiſting practice. We believe, however, that the increaſed value of the turnip crop will not compenſate for 3l. Sterling, loſt by the poſſeſſor, during the time he kept the land in graſs, exceeding the Norfolk term of one year.

At the ſame time we admit, that a conſiderable proportion of Northumberland (perhaps three-fourths) is not naturally calculated for a regular courſe of crops, though the remainder, we believe, is managed in as complete a ſtyle as any other part of the iſland. The tenants are therefore in the right, when they adopt ſuch a ſyſtem, as is moſt conſonant to the ſeveral varieties of ſoil which they occupy; and if it is found that turnips and corn cannot be raiſed in a profitable way without permitting the land to be previouſly refreſhed by graſs, for more years than one, it is certainly advantageous that the plough ſhould be uſed ſparingly in all ſuch ſituations. It is upon this principle that we have conſtantly contended againſt reſtrictive covenants, becauſe they neceſſarily preclude diſcretionary management, and occaſion the ſame line of huſbandry to be followed out, whether the ſoil and other circumſtances permit ſuch an uniformity.

The

The fifth chapter, upon *implements of husbandry*, will be an acceptable treat to every perſon who has made theſe matters his ſtudy. The opinion given upon wheel-carriages, is preciſely what has occurred to us on the ſubject; and the uſe of waggons is, with great juſtice, ſeverely cenſured, as being deſtructive to roads, and of little utility to farmers. The account of the ſwing-plough deſerves attention, being, in our opinion, the beſt demonſtration of the principles upon which ſuch an uſeful and neceſſary implement ſhould be conſtructed. It is, undoubtedly, a matter of ſurpriſe, that no fixed rules have been hitherto adhered to in the conſtruction of the plough, which is evident from the difference of work of the ſeveral ploughs made by the ſame carpenter.

We obſerve, with ſatisfaction, that the ingenious authors have amended their account of the thraſhing-machine, and that they have now done that juſtice to Mr Meikle, the patentee, which his merit deſerves. A very full and accurate deſcription of the machine is given; from which, and from an engraving annexed, any perſon acquainted with the principles of machinery, might, with facility, conſtruct and erect ſuch an implement. Indeed, it is the beſt deſcription of the thraſhing-machine that has come under our conſideration. N.

(To be continued.)

PART III.

EXTRACTS FROM AGRICULTURAL PUBLICATIONS.

Extracts from the Agricultural Survey of the County of WILTS, *reſpecting the Benefit of Water Meadows.*

THERE is, perhaps, no part of this kingdom, where the ſyſtem of watering meadows is ſo well underſtood, and carried to ſo great perfection, as in this diſtrict. This, which is ſo juſtly called by Mr Kent, "the greateſt and moſt valuable of all improvements," was *generally* introduced into this diſtrict at the latter end of the laſt, and the beginning of this century. Many of the moſt valuable and beſt formed meadows, particularly in the *Wyley Bourn*, were made under the direction of one farmer Baverſtock of Stockton, between the year 1700, and the year 1705. And, at preſent, there is ſcarcely a river or brook in the diſtrict that is not applied in ſome way or other to this purpoſe.

An

An imperfect ſcheme of watering had undoubtedly been practiſed before that period. Perhaps, indeed, its introduction into this diſtrict is almoſt coeval with that of folding ſheep, with which it is intimately connected. But the *regular mode*, in which both ſyſtems are now conducted, is certainly not very ancient. Many old farmers, who have died within the memory of man, remembered when neither of the ſyſtems was conducted on any regular plan.

Theory of water meadows.—The idea of watering meadows, ſo far as it relates to bringing the water *upon the land*, was taken from *nature*. It muſt have been always obſerved, that Winter floods produced fertility, provided the water did *not* remain *too* long on the land. The idea of taking the water *off* the land *at will*, and bringing it *on again at will*, is the effect of *art*; and the knowledge of the proper time to do this, the effect of obſervation.

A water meadow is a *hot-bed* for graſs. In what manner water acts upon land, ſo as to produce a premature vegetation, before natural vegetation begins, is a philoſophical problem which it is not a farmer's province to ſolve. It was ſufficient for him to know that the fact was ſo. Obſervation on the effects of water ſo brought on, ſoon ſhewed them at what period its good effects ceaſed, and when it began to do miſchief. This obſervation, therefore, regulated the time of keeping the water on the land; and as this period was different, on different kinds of land, and at different ſeaſons of the year, it became neceſſary that they ſhould have ſuch a command of the water, as to *take it off* immediately, as ſoon as they found the ſtate of the land required it. This, by degrees, produced that regular diſpoſition of the water-carriages and water drains, which, in a well laid out meadow, bring on and carry off the water, as ſyſtematically as the arteries and veins do the blood in the human body.

As water meadows are totally unknown in many parts of the kingdom, and but very partially known in others, it may not be thought improper, in an agricultural account of South Wiltſhire, to ſpeak a little more fully on their nature and properties. If it ſhould tend to excite the ſame improvement in other counties, one of the great objects of the inſtitution of the Board of Agriculture will be anſwered.

Nature and properties of water meadows.—It has been already premiſed, that the principle of a water meadow is, the power of bringing on and carrying off the water at pleaſure. And, provided this great object can be accompliſhed, it is

not

not material what the ſhape of a water meadow is, or that the diſpoſition of the trenches (provincially "*the works of the meadow,*") ſhould be uniform. But, as very little land can be entirely commanded by water, unleſs its inequalities are reduced by manual labour, it has been found convenient to adopt two different kinds of water meadows; one for land lying on declivities, and which muſt in general be watered from ſprings or ſmall brooks; and the other for low land near rivers, to be watered from thoſe rivers.

The firſt kind is called, in Wiltſhire, "*catch-work meadows,*" and the latter, "*flowing meadows.*" The latter are by far the moſt general in this diſtrict.

It is impoſſible to give any intelligible written deſcription the mode of making theſe meadows. This operation muſt be ſeen, to be properly underſtood.

Catch work meadows deſcribed.—But, to elucidate the diſtinction between the two kinds of meadow, and to give ſome idea what are the ſituations in which they may be introduced, it may be neceſſary to remark, that the "catch-work meadow" is made by turning a ſpring, or ſmall ſtream, along the ſide of a hill, and thereby watering the land between the New Cut, (or, as it is provincially called, the Main Carriage), and the original water-courſe, which now becomes the "main drain." This is ſometimes done, in particular inſtances, merely by making the new cut level, and ſtopping it at the end; ſo that, when it is full, the water may run out at the ſide, and flood the land below it. But, as the water would ſoon ceaſe to run *equally*, for any great length, and would waſh the land out in gutters, it has been found neceſſary to cut ſmall parallel trenches or carriages, at diſtances of twenty or thirty feet, to catch the water again; and each of theſe being likewiſe ſtopped at its end, lets the water over its ſide, and diſtributes it till it is caught by the next, and ſo on over all the intermediate beds, to the *main drain* at the bottom of the meadow, which receives the water, and carries it on to water another meadow below; or, if it can be ſo contrived, another part of the ſame meadow, on a lower level.

To draw the water out of theſe parallel trenches or carriages, and lay the intermediate beds dry, a narrow deep drain croſſes them at right angles, at about every nine or ten poles length, and leads from the main carriage at top to the main drain at the bottom of the meadow.

When this meadow is to be watered, the ends of the carriages adjoining the croſs drains are ſtopped with turf, dug on the

the ſpot, and the water if thrown over as much of the meadow as it will *cover well* at a time, which the watermen call a "*pitch of work*;" and, when it is neceſſary to lay this pitch dry, they take out the turves, and let the water into the drains, and proceed to water another pitch.

This kind of water meadow is ſeldom expenſive: The ſtream of water being uſually ſmall and manageable, few *hatches* are neceſſary: and the land lying on a declivity, much leſs manual labour is required to throw the water over it regularly, and particularly *to get it off again*, than in the flowing meadows. The expence of making ſuch a meadow, is uſually from 3l. to 5l. per acre; the improvement frequently from 15s. an acre to at leaſt 40s. The annual expence of keeping up the works, and watering the meadow, which is uſually done by the acre, ſeldom ſo high as 7s. 6d. per acre.

Flowing meadows described.—The other kind of water meadows, viz. thoſe uſually called "*flowing meadows*," require much more labour and ſyſtem in their formation. The land applicable to this purpoſe being frequently a flat moraſs, the firſt object to be conſidered is, how the water is to be *got off* when once brought on; and, in ſuch ſituations, this can ſeldom be done, without throwing up the land in high ridges, with deep drains between them. A main carriage being then taken out of the river at a higher level, ſo as to command the tops of theſe ridges, the water is carried by ſmall trenches or carriages along the top of each ridge, and, by means of moveable ſteps of earth, is thrown over on *each* ſide, and received in drains below, from whence it is collected into a main drain, and carried on to water other meadows, or other parts of the ſame meadow below. One tier of theſe ridges being uſually watered at once, is uſually called "a pitch of work;" and it is uſual to make the ridges thirty or forty feet wide, or, if water is abundant, perhaps ſixty feet, and nine or ten poles in length, or longer, according to the ſtrength and plenty of the water.

It is obvious from this deſcription, that as the water in this kind of meadow is not uſed again and again, in *one pitch*, as in the catch-meadows, that this method is only applicable to large ſtreams, or to vallies ſubject to floods; and as theſe ridges muſt be formed by *manual labour*, the expence of this kind of meadow muſt neceſſarily exceed the more ſimple method firſt deſcribed; and the hatches that are neceſſary to

manage and temper the water on rivers, muſt be much more expenſive than thoſe on ſmall brooks.

The expence, therefore, of the firſt making of ſuch a meadow as this is, will be from 12l. to 20l. per acre, according to the difficulty of the ground, and the quantity of hatch-work required: but the improvement in the value of the land, by this operation, is aſtoniſhing. The *abſtract value* of a good meadow of this kind, may fairly be called 3l. per acre; but its value, when taken as *part of a farm*, and particularly of a *ſheep-breeding farm*, is almoſt beyond computation; and when ſuch a meadow is once made, it may be ſaid to be made for ever; the whole expence of keeping up the works, and watering it frequently, not exceeding 5s. per acre yearly, and the expence of the hatches, if well done at firſt, being a mere trifle for a number of years afterwards.

Supposed quantity of water meadows in this district.—The number of acres of land in this diſtrict, under this kind of management, has been computed, and with a tolerable degree of accuracy, to be between 15 and 20,000 acres.

Indeed, it has been found ſo very beneficial, that very few ſpots of land, capable of being watered, remain otherwiſe, unleſs where ſome *watermill* ſtands in the way, or where ſome perſon, who has the command of the water *above*, refuſes to let it be taken out of its natural courſe to water the lands below.

Some new meadows might be made, and very great and beneficial alterations made in the old ones, if ſome plan could be adopted to get the command of water where neceſſary for this purpoſe, and particularly in the caſe of water-mills. A remedy for this will be afterwards propoſed.

Water meadows do not make a country unhealthy—It has been alleged, by thoſe who know very little of water meadows, that they render the country unwholeſome, by making the water ſtagnant—Daily obſervation proves the fact to be otherwiſe in Wiltſhire; and the reaſon is obvious. It has been already ſaid, that a water-meadow is a "hot-bed for graſs:" The action of the water on the land excites a *fermentation*; that fermentation would certainly, in time, end in *putrefaction*; but the moment putrefaction begins, vegetation ends. Every farmer knows the commencement of this putrefaction, by the ſcum the water leaves on the land; and if the water is not then inſtantly taken off, the graſs will rot, and his meadow be ſpoiled for the ſeaſon. The very principle of water-meadows, will not permit water to be ſtagnant

nant in a water-mead country; it muſt be always kept in action, to be of any ſervice: beſides, many of the beſt water meadows were, in their original ſtate, a ſtagnant unwholeſome moraſs.

The draining ſuch land, and making it ſo firm that the water may be taken off at will, muſt contribute to the healthineſs of the country, inſtead of injuring it.

Great advantages from water meadows.—It is frequently aſked, how it comes to paſs, that although water meadows are ſo uſeful, as to be almoſt indiſpenſable in South Wiltſhire, yet, in other counties, where they are not known, the want of them is not felt; nay, that there are, even in this diſtrict, many pariſhes who have none, and even breed lambs without them? To this I anſwer, that the fair queſtion is not, "How do other counties do without them?" but, "How could the farmers of this diſtrict, who are happy enough to have water meadows, purſue their preſent ſyſtem of ſheep-breeding, if thoſe meadows were taken away?" A ſyſtem which, I do not heſitate to ſay, is more profitable to themſelves, their landlords, and the community at large, than any other that could be ſubſtituted in its room; and perhaps this queſtion cannot be anſwered better, than by exhibiting the contraſt between thoſe who have water meadows, and thoſe who have none, in the ſame diſtrict.

Every farmer, who keeps a flock of ſheep, and particularly a breeding flock, in ſo cold and late ſpringing a diſtrict as South Wilts, knows and feels the conſequences of the month of April,—"That month, *between hay and grass*, in which he who has not water meadows for his ewes and lambs, frequently has *nothing!*" The ewes will bring a very good lamb with hay only; perhaps a few turnips are preſerved for the lambs, which, in a favourable ſeaſon, may laſt them through March; but if they are then obliged to go to hay again, the ewes ſhrink their milk, the lambs "pitch and get ſtunted," and the beſt Summer food will not recover them. To prevent this, recourſe is had to feeding the graſs of thoſe dry meadows that are intended for hay, the young clovers, and frequently the young wheat; in fact, every thing that is green.—And who will pretend to eſtimate what is the loſs that a farmer ſuffers by this expedient?

The rye-graſs, on the expoſed parts of this diſtrict, is ſeldom "a bite" for the ſheep, till May-day. If the ſeaſon ſhould permit any turnips to be kept till that time, (which can ſeldom be depended upon), they are not only of little

nouriſhment to the ſtock, but they exhauſt the land ſo as to prejudice the ſucceeding crop. And it ought to be remarked by the way, that in many parts of this diſtrict, the ſoil is not at all favourable to the production of turnips. It therefore neceſſarily follows, that a farmer, under theſe circumſtances, has no *certain reſource* to ſupport his ſtock during this month, but hay—and even in that he is ſometimes diſappointed, by having been obliged, in the preceding Spring, to feed all the land which he had laid up for a hay crop: he is then obliged to buy hay, and that frequently at the diſtance of many miles. And, to add to his diſtreſs at this critical time, his young ewes are then brought home from wintering, to be kept nearly a month on hay alone.

In this month, which ſo often ruins the crops, and exhauſts the pockets of thoſe ſheep breeding farmers who have no water-meadows, the water-mead farmers may be truly ſaid to be "in clover." They hain up their dry meadows early, ſo as almoſt to inſure a crop of hay; they get their turnips fed off *in time* to ſow barley, and have the vaſt advantage of a *rich fold* to manure it. They ſave a *month's hay*, and have no occaſion to touch their field-graſs till there is a good bite for their ſheep; and their lambs are as forward at *May-day*, as thoſe of their leſs lucky neighbours are at *Midſummer*. And, after all, they are almoſt certain of a crop of hay on their water meadows, let the ſeaſon be what it will.

Management of water meadows.—The management of water meadows (as nearly as it can be deſcribed in an account neceſſarily ſo conciſe as this), is in the following way.

As ſoon as the after graſs is eaten off as bare as can be, the manager of the mead (provincially "the drowner") begins cleaning out the main drain, then the main carriage, and then proceeds to "right up the works," that is, to make good all the water carriages that the cattle have trodden down, and open all the drains they may have trodden in, ſo as to have one tier or pitch of work ready for "drowning," and which is then put under water (if water is plenty enough) during the time the drowners are righting up the next pitch. In the flowing meadows this work is, or ought to be, done early enough in the Autumn, to have the whole mead ready to catch, if poſſible, "*the firſt floods after Michaelmas*," the water being then "thick and good," being the *firſt* waſhing of the arable land on the ſides of the chalk hills, as well as of the dirt from the roads, &c. &c.

The

The length of this Autumn watering cannot always be determined, as it depends on ſituations and circumſtances; but if water can be commanded in plenty, the rule is, to give it a "thorough good ſoaking" at firſt, perhaps a fortnight or three weeks, with a dry interval of a day or two, and ſometimes two fortnights, with a dry interval of a week, and then the works are made as dry as poſſible, to encourage the growth of the graſs. This firſt ſoaking is to make the land ſink, and pitch cloſe together; a circumſtance of great conſequence, not only to the *quantity*, but to the *quality* of the graſs, and particularly to encourage the ſhooting of the new roots which the graſs is continually forming, to ſupport the forced growth above.

While the graſs grows freely, a freſh watering is not wanted; but, as ſoon as it flags, the watering may be repeated for a few days at a time, whenever there is an opportunity of getting water; always keeping this fundamental rule in view, "*To make the meadows as dry as poſſible between every watering;*" and to "*ſtop the water the moment the appearance of any ſcum on the land ſhews that it has already had water enough.*"

Some meadows that will bear the water *three weeks* in October, November, or December, will perhaps not bear it *a week* in February or March, and ſometimes ſcarcely *two* days in April or May.

In the catch meadows watered by ſprings, the great object is to keep the "works of them" as dry as poſſible between the intervals of watering; and, as ſuch ſituations are ſeldom affected by floods, and generally have too little water, care is neceſſary to make the moſt of the water, by catching and rouſing it as often as poſſible; and as the *top-works* of every tier or pitch will be liable to get more of the water than thoſe lower down, care ſhould be taken to give to the latter a *longer time*, ſo as to make them as equal as poſſible.

Cuſtom of feeding meadows with ſheep.—It has already been ſaid, that the great object, in this diſtrict, of an early crop of water meadow graſs, is, to enable the farmer to breed early lambs.

As ſoon as the lambs are able to travel with the ewes, (perhaps about the middle of March), they begin to feed the water meadows. Care is, or ought to be taken, to make the meadows as dry as poſſible, for ſome days before the ſheep are let in.

The graſs is hurdled out *daily* in portions, according to what the number of ſheep can eat in a day, to prevent their trampling the reſt; at the ſame time, leaving a few open ſpaces in the hurdles for the lambs to get through, and feed forward in the freſh graſs. One acre of *good grass* will be ſufficient for five hundred couples for a day.

On account of the quickneſs of this graſs, it is not uſual to allow the ewes and lambs to go into it with empty bellies, nor before the dew is off in the morning.

The hours of feeding are uſually from ten to eleven o'clock in the morning, to about four or five in the evening, when the ſheep are driven to fold; the fold being generally, at that time of the year, (as has been mentioned before), on the barley fallow. And the great object is to have water-mead graſs, ſufficient for the ewes and lambs, till the barley ſowing is ended.

Meadows laid up for hay.—As ſoon as this firſt crop of graſs is eaten off by the ewes and lambs, the water is immediately thrown over the meadows, (at this time of the year, two or three days over "each pitch," is generally ſufficient) and it is then made perfectly dry, and laid up for a hay crop. Six weeks are uſually ſufficient for the growth of the crop. It ſeldom requires eight; and there have been inſtances of graſs crops being produced in five.

Nature of water meadow hay.—The hay of water meadows, being frequently large and coarſe in its nature, it is neceſſary to cut it young; and, if made well, it then becomes of a peculiarly nouriſhing milky quality, either for ewes or dairy cows.

The water meadows are laid up for a ſecond crop, in *ſome inſtances;* but this is only uſual when hay is ſcarce: not that it is ſuppoſed to hurt the land, but the hay is of that herbaceous ſoft nature, and takes ſo long time in drying, that it is ſeldom well made. It is uſually of much greater value to be fed with dairy cows. And, for that purpoſe, a fluſh of after-graſs, ſo early and ſo rank, will be preciſely of the ſame comparative ſervice to the dairy, as the Spring feed has been deſcribed to be for ewes and lambs.

The cows remain in the meadows till the "drowner" begins to prepare for the Winter watering.

Water meadows ſafe for ſheep in Spring, but will rot them in Autumn.—Water meadows are reckoned to be perfectly ſafe for ſheep in the Spring, even upon land that would rot ſheep if it was not watered; but, in the Autumn, the beſt water meadows

meadows are ſuppoſed to be dangerous. This is at preſent an explicability in the operations of nature; and a diſcovery of the reaſon might perhaps lead, in ſome meaſure, to a diſcovery of the cauſes of the rot in ſheep. But the circumſtance itſelf is rather an advantage, than a diſadvantage, to this diſtrict; as it obliges the farmers to a keep a *few dairy cows*, to feed the water meadows in Autumn, and to provide artificial graſſes, or other green crops, for their ſheep during that period.

Proper ſoils for water meadows.—From what has been ſo repeatedly urged, on the neceſſity of making water meadows dry, as well as wet, every reader might have inferred the advantage of having them, if poſſible, on "*a warm abſorbent bottom.*"

The bottom, or ſubſoil of a water-mead, is of much more conſequence than the quality or the depth of the top-ſoil.

Not but that land on peaty or clay bottoms may be conſiderably improved by watering; and there are many good water meadows on ſuch ſoils; but they are not ſo deſireable, on account of the difficulty of draining the water out of them, and making them firm enough to bear trading.

A looſe gravel, or, what perhaps is ſtill better, a bed of broken flints, with little or no intermixture of earth, wherever it can be obtained, is the moſt deſireable bottom.

On many of the beſt water meadows in this diſtrict, where the bottom is a warm abſorbent gravel, or rather a bed of broken flint, the ſoil is not ſix inches deep, and that depth is quite ſufficient in thoſe ſeaſons when water is plenty, as the graſs will root in the warm gravel, in preference to the beſt top-ſoil whatever; and ſuch meadows always produce the earlieſt graſs in the Spring. Nor is it ſo very material, of what *kinds of graſſes* the herbage is compoſed, when the meadow is made. *That kind* will always predominate, which *agrees beſt with the ſoil and the water*, provided the ſupply of water is regular and conſtant *every Winter*; otherwiſe, *that kind* will predominate which will bear *wet and dry*; and ſome of the worſt graſſes, in their native ſtate, will become the beſt, when made ſucculent by plenty *of water*.

Woburn Sheep-Shearing.

It is with ſingular pleaſure that we preſent a particular Account of the truly rational Agricultural Fete, *lately given by his Grace the* Duke *of* Bedford, *at Woburn Abbey, which cannot fail to be attended with the happieſt conſequences to the Huſbandry of Great Britain. Compared with this rural entertainment, how contemptible do the innumerable details of balls, routs, &c. given this Spring in the metropolis, appear! His Grace has adopted a line of conduct creditable to himſelf, and uſeful to the public; and holds out a pattern which we earneſtly hope may be extenſively imitated.*

On Monday, June 16, the ſheep-ſhearing and ſhew of cattle commenced; and this truly laudable inſtitution attracted ſeveral hundreds of agriculturiſts and breeders from all parts of this country, among whom were ſeveral gentlemen, members of the well-known Society of Breeders from Leiceſterſhire; a Baron from Germany, who is at the head of an agricultural eſtabliſhment in that country: and four gentleman from Ireland.

His Grace the Duke of Bedford gave a public breakfaſt at the Abbey, at nine o'clock.

At about eleven o'clock, His Royal Highneſs Prince William of Glouceſter arrived at the Abbey, from the ſeat of Sir George Oſburne at Cheakſands, where he had been on a viſit ſince the review, on Friday, at Hatfield. His Royal Highneſs was attended by Sir George; and, ſoon after their arrival, the company proceeded, in a grand cavalcade, to the New Farm-Yard, in the park, for the purpoſe of inſpecting the ſheep ſhearing, at which five of the beſt hands that could be procured were employed: They then proceeded to the building lately erected for examining the *ewes* that are to be let for the next ſeaſon, which were viewed by the hirers of *tups*; but their prices were not fixed, as laſt year: they were to be ſhewn again on Tueſday, with the prices fixed on them.

The certificates were then opened by his Grace, and a Committee of the different candidates for the prize of fifty guineas, to be given by his Grace (for encouraging the introduction of the Leiceſter and South Down breed of ſheep into Bedfordſhire) to

to the perſon in Bedfordſhire who ſhould, between June 1799 and Chriſtmas, expend the largeſt ſum of money (not leſs than ſixty guineas) in the purchaſe or breeding ewes or theaves of the new Leiceſter or South Down breed. Theſe were taken into conſideration; but the ſucceſsful candidate was not announced.

About three o'clock the company adjourned to dinner; and his Grace entertained near 200 noblemen, gentlemen, and yeomen, in the large hall, in the ancient part of the Abbey, where tables were laid, which branched out in three directions; but ſo contrived, as to have but one head, at which his Grace preſided. Prince William of Glouceſter ſat as Croupier.

About ſix o'clock they left the Abbey, and proceeded to the farm-yard again, when a very fine hog, the property of Mr Pickford, waggon-maſter in Market-ſtreet, was ſhewn, which was ſuppoſed to weigh about an hundred ſtone. During the whole of this time the men continued ſhearing ſheep, in a place conveniently adapted for the whole of the meeting to ſee them. His Grace then conducted the company to a paddock, near the Evergreens, to ſee ſome ſelect Devonſhire oxen; and from thence they proceeded to the water meadow, near Birchmore Houſe, in Crawley-lane, where there were ſome very fine Devonſhire cows.

The meeting did not break up till near dark, when the Prince returned to Sir George Oſburne's.

SECOND DAY.

On Tueſday, the Duke of Bedford, attended by his company, proceeded from the Abbey on horſeback to the New Farm-Yard in the Park, where they were met by great numbers who had arrived from different parts.

The tups that were ſhewn yeſterday were ſhewn ſingly again to-day, and they were deſcribed as follows:

Shearhogs, No. 1. to 8. by the Diſhley L. Mr Stone's ſheep.

No. 9. to 12. Two Shears, by a ſon of the Diſhley L.

No. 14. and 15. Three Shears, by Mr Breedon's L. a ſon of ditto.

The Sweepſtakes of five guineas each, made by the Duke of Bedford, Lord Winchelſea, Lord Sommerville, and Mr Bouverie, to produce at this ſheep-ſhearing the beſt two years old heifers of the Devonſhire breed: The Duke of Bedford's being dead, and Mr Bouverie not producing one, it reſted with Lord Winchelſea and Lord Sommerville: and a Committee was appointed, conſiſting of Mr Smith of Tirmarſh, in Northamptonſhire, Mr Stone of Loughborough in Leiceſterſhire, and a Mr Warren; when, after a conſiderable examination, they declared in favour of Lord Winchelſea.

Mr

Mr Garrard the modeller of cattle, from London, exhibited the models of the famous ſhew of cattle, which were exhibited at Smithfield laſt Chriſtmas, which were highly approved of: he likewiſe exhibited a number of other well-known cattle. Several improved implements in huſbandry were exhibited, particularly a chaff-cutter, ploughs, harrows, &c. At three o'clock, the Duke entertained about two hundred of the company in the great hall in the Abbey with an elegant dinner, conſiſting of 160 covers.

About ſix o'clock, the company aſſembled again at the New Farm Yard, when the tups, ſhewn in the morning, were put up to be let for the enſuing ſeaſon,

No. 1. a 20 guineas, was taken by Sir John Sebright.
No. 2. a 30 guineas, there were five Candidates for: they drew lots, and Mr Matſon, from Kent, drew the prize.
No. 3. a 30 guineas, there were ſix Candidates; and Mr Moore of Aſpley, in this county, drew the prize.
No. 4. a 15 guineas, was not let.
No. 5. a ſix ditto, ditto.
No. 6. a 50 guineas, there were thirteen Candidates; and Mr Matſon, from Kent, drew the prize.
No. 7. a 80 guineas, there were ſeven Candidates; and Mr Money, from Norfolk, drew the prize.
No. 8. a 25 guineas, Mr Bithery, of Stoke Mills, in this county, was the only Candidate.
No. 9. a 30 guineas, there were three Candidates; and Mr Pears, of Thorney Fen, near Peterborough, drew the prize.
No. 10. a 40 guineas, was not let.
No. 11. a 70 guineas, there were eight Candidates; and Mr Horton, of March, in the Iſle of Ely, drew the prize.
No. 12. a 100 guineas, was not let.
No. 13. a 100 guineas, was not let.
No. 14. a 20 guineas, let to Mr Mann, of Henloe, in this county.
No. 15. a 40 guineas, was not let.

This buſineſs took up the whole of the afternoon, till near dark, during which ſeveral bets were made about Cattle.

THIRD DAY.

Wedneſday, there was a greater number of people aſſembled than on the former days; and the weather proving fine, the ſight of ſuch a number of opulent men, aſſembled upon ſo laudable and rational a purpoſe, was highly gratifying.

About eleven o'clock, the company began to move in a grand cavalcade from the Abbey, and they were met in the park by a great number of others, who had come from different parts, horſemen,

horſemen, and others on foot, of the firſt reſpectability, when they proceeded to the New Farm-Yard.

Nine South Down two-ſhears, and one three ſhear, were exhibited in the Exhibition Room, and were examined by the hirers of the tups.

Two remarkable fine and fat cows, which had been fatted by poor feed, under certain management, the property of Mr Maxay of Knotting, in this country, were exhibited.

A machine for dreſſing corn in an expeditious way, was exhibited in the yard, for which Mr Cooche of Malſton, in Northamptonſhire, has lately obtained a patent.

As ſoon as the inſpection of the rams, and exhibitions were over, the company, headed by the Duke, proceeded to a fallow field, near Birchmore-houſe, where experiments were tried by five different ploughs, namely, a Northumberland, a Surry, or Duckats, a Bedfordſhire, a Norfolk, and a Scotiſh one, on which experiments were made in ſowing turnips, by making the harrows wide apart. The manure was then regularly diſtributed in them; after which, a roller was drawn by an ox, and to the roller was attached a drilling machine, ſo contrived for the roller to cover the manure with the ridges of earth, and the ſeeds to fall on the earth which had fallen on the manure; and the machine was ſo contrived as to cover the ſeed with earth; ſo that the ſeed lay as on a hot-bed. After the inſpection of the ploughs, the company proceeded to Ridgemond-fields, where experiments were made with Mr Leiceſter's ſcuffling harrows; for the improvement of which he has lately obtained a patent. Experiments were alſo made on Mr Potts' improved harrows.

Theſe experiments were made in conſequence of his Grace (with that truly laudable zeal for which he is ſo eminently diſtinguiſhed in the encouragement and improvement of agricultural purſuits) having offered a premium of twenty guineas to the perſon who ſhould produce, at this ſheep-ſhearing, the beſt and moſt newly invented implement in agriculture. It is left to a Committee to decide, which implement produced ought to have the preference; whether any of them merit the reputation that the acquiſition of a premium would confer; and which will be made known by the Committee on Thurſday. About three o'clock, his Grace entertained about two hundred gentlemen with an elegant dinner at the Abbey, at which his Grace preſided.

A challenge was made by ſome Hereford gentlemen, to produce better cattle than any county in England, which was taken up by Sir Thomas Carr, High Sheriff for the county of Suſſex, who undertook to produce as fine from Suſſex.

After

After dinner, the company proceeded to inſpect three fat wedders, two of them belonging to Mr Platt of Lidington, and one to Mr Cowley of Aſpley, as candidates for a ſilver cup, value ten guineas, for one, and a premium for a ſecond, of a cup value five, which his Grace has offered. They are to be ſheared, weighed alive, killed, and weighed when dead; and, after all circumſtances are taken into conſideration by a Committee, they will determine which are the beſt.

The company then returned to the New Farm-Yard, when the ten South Down tups were let as follows: No. 1. for 10 guineas; No. 2. for 40 guineas; No. 3. for 30 guineas; No. 4. for 25 guineas; No. 5. for 30 guineas; No. 6. for 80 guineas; No. 7. for 50 guineas; No. 8. for 40 guineas; No. 9. for 120 guineas; No. 10. for 25 guineas.

An experiment was tried on the corn-dreſſing machine, produced in the morning; when it completely dreſſed a buſhel of wheat in ſix minutes.

FOURTH DAY.

Thurſday morning, his Grace gave another public breakfaſt at nine o'clock; and about eleven his Grace and the company arrived at the New Farm-Yard; when the following Leiceſterſhire breed of tups was exhibited in the exhibition-room.

SHEARHOGS.

No. 1.	by a ſon of Diſhley L.	was let for	10 guineas.
2.	by ditto ditto	ditto	10 ditto.
3.	by ditto ditto	ditto	10 ditto.
4.	by ditto ditto	ditto	10 ditto.
5.	by ditto ditto	ditto	15 ditto.
6.	by ditto ditto	ditto	15 ditto.

TWO SHEARS.

7.	by a ſon of Diſhley L.	was let for	12 guineas.
8.	by ditto ditto	ditto	12 ditto.
9.	by ditto ditto	ditto	15 ditto.
10.	by ditto ditto	ditto	20 ditto.

THREE SHEARS.

11.	by Breedon's L.	was let for	15 guineas.
12.	by K. 4 ſhear	ditto	15 ditto.
13.	by L. 3 ditto	ditto	20 ditto.

The following South Down tups were then exhibited, and put up to be let.

No. 1.	at 10 guineas.	No. 6.	at 80 guineas.
2.	at 40 ditto.	7.	at 50 ditto.
3.	at 30 ditto.	4.	at 40 ditto.
4.	at 25 ditto.	9.	at 120 ditto.
5.	at 30 ditto.	10.	at 25 ditto.

All of which were let, except No. 7. and No. 9.

Mr

Mr Garrard exhibited a model of a piece of the loin of Mr Smith's fat three-ſhear weather, which won the premium at the ſheep-ſhearing in 1799.—The fat meaſured ſeven inches.

Mr Johnſon, an eminent farmer near Northampton, exhibited twelve fine ewes, and ſold them all.

After three o'clock they adjourned to the Abbey to dinner; but on account of ſome engagements of his Grace, it was not ſerved up till five o'clock.

After dinner, the following toaſts and ſentiments were drank—The King—Succeſs to Agriculture—The Thraſhing Mill—Small in Size, and great in Value—A good Crop of Wheat—Drilling—Breeding in all its branches—Succeſs to Experiments——The Fleece—The Plough—Grazing—The Tup Trade—To the Memory of Mr Bakewell—Mr Coke—Lord Winchelſea—Sir Charles Davers—Lord Lauderdale.

When the cloth was removed, the cups to be given by his Grace, as premiums, were put on the table; and his Grace informed the company, in an adreſs, of the determinations of the Committee which had been appointed to inveſtigate the different claims. He began with the premiums offered for the diſcovery of implements of huſbandry; and ſtated, that the Committee had examined the corn-dreſſing machine belonging to Mr Cooche, and the ſcuffling harrow belonging to Mr Leſter, both of which they highly approved; but, as they had obtained patents, they did not think them entitled to premiums; and they were of opinion, that none of the other implements exhibited were deſerving of the prize.

The next premiums were for encouraging the introduction of the new Leiceſter and South Down breed of Sheep in Bedfordſhire.

No. 1. To the perſon in Bedfordſhire who ſhould, between June 1799 and Chriſtmas following, expend the largeſt ſum of money (not leſs than ſixty guineas) in the purchaſe of breeding ewes, or theaves of the Leiceſter or South Down breed, a premium of fifty guineas.

No. 2. A premium of twenty guineas to the perſon who ſhould expend the next largeſt ſum in the ſame object, and on the ſame conditions.

His Grace ſtated, that the candidates were, Mr Parkins of Dunſtable; Mr Bailey of Marſton; and Mr Runciman of Woburn: And the Committee, on inveſtigating their claims, found that Mr Parkins had expended 168l. Mr Bailey 126l. and Mr Runciman 102l. He was ſorry to ſay, they had not ſtrictly complied with the conditions: however, under all theſe circumſtances, the Committee determined that Mr Parkins was entitled to the premium of fifty guineas, and Mr Bailey to the premium of twenty guineas.

PRE-

PREMIUMS FOR FAT WETHERS.

No. 1. To the perſon who ſhould breed, and produce at Woburn Sheep-ſhearing, 1800, the beſt two-ſhear fat wether, the premium of a cup, value ten guineas.

No. 2. To the perſon who ſhould breed, in Bedfordſhire, and produce at Woburn Sheep-ſhearing, 1800, the ſecond beſt two ſhear fat wether, a cup, value five guineas.—The ſame perſon not to have both premiums.

The former, the Committee adiudged to Mr Cowley of Aſpley; and the ſecond to Mr Platt of Lidlington,

PREMIUMS FOR THEAVES BRED IN BEDFORDSHIRE,

No. 1. To the perſon who ſhould breed, in Bedfordſhire, and produce at Woburn Sheep-ſhearing, 1800, the beſt theave, a cup, value ten guineas.

No. 2. To the perſon who ſhould breed, in Bedfordſhire, and produce, at Woburn Sheep-ſhearing, 1800, the ſecond beſt theave, a cup, value five guineas.

The former was adjudged to Mr Butfield of Poſtgrave, and the latter to Mr Bennet of Temsford.

His Grace then concluded, by congratulating the company upon the progreſs in Agricultural Improvement which had been made, and by exhorting them to perſevere in their laudable exertions.

PART IV.

AGRICULTURAL INTELLIGENCE.

PERHAPS at no period within our remembrance, was it a more difficult object, to preſent an accurate deſcription of the rural economy of Britain, than at preſent; and the cauſes which occaſion this difficulty, may be ſuppoſed obvious to the moſt ſuperficial obſerver. The ſtate of the public mind does not leſſen the difficulties naturally attending the arrangement of ſuch diverſified details, though it ſtimulates us to be as corre

correct as poſſible in the different articles of intelligence which we are now to give. Diſtreſſed by the extraordinary prices of the neceſſaries of life, we are not ſurpriſed to find, that the judgment of the moſt liberal-minded individuals ſhould be biaſſed when the ſtate of the country is under conſideration. In their anxiety to procure relief, they eagerly caſt their eyes upon the preſent crop, and fondly expect that the calamities under which they ſuffer will be effectually removed when it arrives at maturity. It would have afforded us the moſt heart-felt gratification, could we, at this time, have cheriſhed ſuch hopes; but while we will not exaggerate the diſtreſſes of the country, we are equally determined not to create expectations which, in all human probability, will not be gratified.

In this leading article, it is not our deſign to do more than give a ſuccinct deſcription of all rural affairs during the paſt quarter, and to offer a conciſe opinion reſpecting the probable conſequences. This ſhall be formed from the beſt information which it has been in our power to collect.

The weather, during the months of April, May, and June, has, upon the whole, proved unfavourable to the growth of corn and graſs in North Britain, which occaſions every kind of grain to be a ſtage behind, at this advanced period of the ſeaſon. The wind has generally blown from the eaſtern points, and been attended with an uncommon degree of cold, ſeldom prevailing for ſuch a length of time. The month of April was friendly to vegetation, and appearances were then very promiſing. The firſt three weeks of May changed this flattering proſpect; and a ſevere drought, accompanied, at times, with high gales from the weſt, has prevailed, upon the eaſtern coaſt, through the whole of June, which has checked vegetation in every quarter, and ſeriouſly threaten to diminiſh the crop of the moſt favoured diſtricts.

The effects of the laſt deplorable ſeaſon, upon the current crop, now appear, in various ways, in the ſeveral diſtricts, according to the nature of the ſoil, the perfectneſs of labour beſtowed, and the ſtate of the weather when the ſeed was put into the ground. To ſpeak in general terms, the rich dry lands upon the ſea-coaſt, and the deep loams in the inland parts of the country, which were in good heart, have not apparently received any material injury from the exceſſive wetneſs of laſt Winter, unleſs the poſtponement of the wheat-ſeed till the Spring months, and the vegetation of immenſe quantities of weeds, are to be conſidered in that light: But,

upon

upon thoſe extenſive tracts, where clays of different varieties, and ſoft mooriſh ſoils, are predominant, the conſequences are of a different nature. There the wheat could not, in numerous inſtances, be ſown with the leaſt proſpect of advantage. The Spring grains have made an imperfect braird. The ſurface, after being harrowed, baked into a ſtrong cruſt or paſte when dry weather ſet in, which ſtinted the growth of the young plants; while the coldneſs of the ſubſoil, from the quantity of moiſture lodged in the veins of the earth, leſſened their paſture, and kept them in a languiſhing and unthriving ſtate.

The grub-worm has, this year, made greater ravages than common, eſpecially among oats ſown after graſs; and its increaſe may ſafely be aſſigned to the ſuperabundant moiſture of laſt ſeaſon. Several fields have been nearly deſtroyed by the attacks of this deſtructive animal; and perhaps the loſs ſuſtained is greater than ever experienced in North Britain. In the northern counties of England, we learn that the Winter wheat has ſuffered in a ſimilar way.

The markets for grain, notwithſtanding the extenſive importations, have not declined; and in the article of wheat, they have lately met with a conſiderable advance. Without this importation, it is is indiſputable that a degree of ſcarcity would have been felt in Britain, ſimilar to that which prevailed at the concluſion of the preceding century, when corn could hardly be procured, during the Summer months, upon any terms. From the cuſtom houſe returns, it appears that above half a million of quarters of wheat have already been imported into London; and it is believed that nearly the ſame quantity has been received at the outports.

Wool, from the intended union with Ireland, or an increaſe of manufactures at home, promiſes to riſe in price. According to ſeveral accounts, very little is yet ſold, though the ſellers, in every inſtance, are looking for an advance.

Butcher-markets have, during this quarter, arrived at a pitch never known in Britain at the moſt perilous time; and though now ſomewhat reduced, ſince lamb became plentiful, yet, from the great failure of the graſs crop, and the avidity with which purchaſes are made, it is more than probable that, in the article of beef, they will not ſoon return to their ordinary level. The riſe has been general over the whole iſland, and has occaſioned a number of half-fed beaſts to be ſlaughtered, which, under different circumſtances, would ſtill have remained in the hands of the graziers.

It

It gives us pleaſure to mention, that the moſt ſedulous attention continues to be generally paid to the condition of the lower ranks; and we cannot avoid recommending that this ſhould be ſteadily perſevered in, ſo long as the prices of the neceſſaries of life continue at advanced rates. It is indeed phyſically impoſſible that ſuch can ſupport their families, unleſs relief is afforded them in this way, or the rate of wages increaſed in an equal manner to the riſe upon proviſions.—Were markets to remain ſtationary, the latter alternative would be moſt expedient; but as that is out of the queſtion, every motive of duty and philanthropy calls loudly upon thoſe gifted with the means, to provide for their wants. The uncommon exertions of the higher ranks, during this memorable year, do them the greateſt honour, and ought to be recorded for the benefit of poſterity, in caſe the country, at a future period, ſhould be viſited with a ſimilar calamity.

Notwithſtanding the extent of the preſent diſtreſs, there is cauſe to apprehend that a change will not take place ſo early as is devoutly to be wiſhed. Independent of the ſcarcity and high rate of markets, which would operate with great weight againſt the effects of the moſt productive crop, ſeveral circumſtances concur to render the proſpect very alarming. A ſmaller quantity of wheat was ſown this year than common; and the general look of that grain is much below a medium. Many fields of Spring grain were imperfectly managed, both in reſpect of cultivation and ſeed; and the extent of the ground under crop, in the higher diſtricts, was neceſſarily curtailed. If we take into account the ſmall quantity of barley, oats, and beans on hand, and view the aſpect of the crop with an unprejudiced eye, the warrantable concluſion would not be ſuch as to afford cauſe for expecting conſiderable relief. Still, after all, the crop may prove more productive than expected, as it is the ſtate of the weather in July and Auguſt that regulates, in a great meaſure, both the quantity and quality of grain. In a word, the crop upon the ground threatens to be of leſs bulk, and the harveſt in moſt places later than ordinarily happens. Yet it is impoſſible to ſpeak with preciſion reſpecting its value, though the preſent appearances are far from being favourable.

EXTRACTS FROM PRIVATE CORRESPONDENCE.

SCOTLAND.

Ayrshire Quarterly Report.

The weather, during the months of April and May, when the greateſt part of our corn is ſown, was very bad, and of courſe a conſiderable extent of land received imperfect cultivation. This, joined with the bad ſeed ſown in the higher diſtrict, occaſions the fields to look ill, and, upon the whole, more backward than laſt year.

Not much wheat is raiſed in this county; but the fields carrying that grain may be conſidered as in a thriving ſtate. Barley and beans are alſo not ſown in quantities; but, for the ſeaſon, theſe grains have a tolerable appearance. Oats are our principal grain, and look badly; much damaged ſeed was ſown, and the grub worm has done much injury.

The potatoe fields were much enlarged this year, and at preſent they have a very favourable appearance. The diſorder called the *curl*, is hardly known with us. Turnips are litle ſown in this county; and a greater breadth of ground is not occupied with them than in former years.

The grain markets in the month of May were ill ſupplied; but, during this month, a fuller quantity has been preſented. Our current prices are as follows:

Wheat, *per* boll of 4 Winchester buſhels,			48s. to 60s.
Beans,	ditto	ditto	48s. to 53s.
Barley,	ditto	8 ditto	60s. to 80s.
Oats,	ditto	ditto	54s. to 60s.

Meal, *per* peck of 8lb., 3s. 3d. to 3s. 4d.

Quartern loaf of bread, 1s. 7½d.

Potatoes, 14 pints to the peck, 2s.

Butter, *per* lib. of 24 ounces, 1s. 2d. to 1s 4d.

Fat cattle from 8s. to 12s. *per* Dutch ſtone, ſinking the offal. Retail price of beef, 8d. to 11d. *per* lib. of 24 ounces. Mutton and lamb at ſimilar prices; the quality very bad. Veal, from 3d. to 7d. Wool, from 5s. to 20s. *per* ſtone of 24 lib. Engliſh Hay, from 10d. to 1s. *per* ſtone.

The hay crop looks very ill; a great part of it will not cut; and the paſture graſſes were never ſeen worſe in this county.

June 21ſt.

Berwickshire

Berwickshire Quarterly Report.

The paſtures of this quarter have, in general, exhibited a ſcanty appearance; but this muſt, in ſome meaſure, be attributed to the operation of adventitious circumſtances; ſuch as, the failure of laſt turnip crop, which threw an unuſual quantity of ſtock upon paſture fields during the Winter; the high price of corn and hay, which induced farmers to turn their horſes early to graſs; while, in many caſes, a want of fodder drove cattle from the ſtraw yard, before vegetation was ſufficiently advanced to ſupport them in the field. The drought is beginning to be ſeverely felt on the dry ſoils.

The hay crop, upon cold clay ſoils, is very light; where the ſoil is free, the appearance is more favourable; but, from the cold weather in May and June, and many fields having been paſtured in the Spring, hay harveſt muſt be late, and the produce will not equal the average of ordinary years. The young clovers of this year, in general, promiſe well.

The experience of 1800 will ſtrongly inculcate the neceſſity of being particularly attentive in the choice of ſeed corn; for never was the produce from ſeed of different qualities ſo eminently conſpicuous, as in the appearance of the crops this ſeaſon.

Winter wheats ſtill continue thin and weak; Spring ſown fields are thicker; and where the preceding turnip crop was weighty, the wheat is looking well.

Barley upon ſtrong clay ſoils, is, in general, but a poor crop; where it ſucceeded turnip, the appearance is in general favourable; ſeveral fields are juſt beginning to ſhow the ear.

Oats have a more promiſing appearance than any of the other grains, though, upon ſome wet clay ſoils, they alſo look weak and thin.

Peas are generally thin, and in many caſes very bad; both wheat and peas occupy a much ſmaller extent than uſual; and as neither of theſe crops are likely to make a large return per acre, the aggregate produce of this county, in wheat and peas, muſt fall greatly ſhort of former years.

From ſo much of the land having been ſtirred wet, the fields everywhere exhibit an unuſual blow of yellow annual weeds. In Lammermuir many of the fields make a very thin appearance, from having been ſown with froſted grain; and in ſome ſpots towards the eaſt end of the lower diſtrict, conſiderable damage has been done by the ſmail and ſlug.

This quarter has been uncommonly favourable for the preparation of turnip-fallows; which, from the high price of ſeed laſt Winter, will be ſown to an unuſual extent: The ſeed has every-

where vegetated freely, and the young plants have in general a healthy appearance. Potatoes are a fine crop, being free of the curl in general.

The prices of both fat and lean ſtock kept advancing till towards Whitſunday, ſince which they have been upon the decline: The demand for lean ſtock to the Engliſh market, has been rather leſs than uſual during this quarter.

Nothing can yet be ſaid with certainty as to the price of wool; the ſale of that article being ſcarcely commenced on this ſide of the Tweed.

From the ſmall quantity of grain in the hands of farmers, very little has been doing in the corn markets of late.

Prices at Berwick, June 28th, per boll of ſix Wincheſter bu-ſhels.

Wheat,	60s. to 80s.	Oats,	40s. to 45s.
Beans,	65s. to 70s.	Barley,	40s. to 50s.

Butcher meat, which was at one time as high as 10d. per lib., has, during this month, been gradually on the decline. Prices at Berwick, June 28th, were as follows:

Beef, 8d. Veal, 6d. all per lib. of 16 ounces Engliſh.
Mutton, 8d.
June 30.

Extract of a Letter from a Gentleman in the Eaſtern part of Berwick-ſhire, dated June 29.

"About three weeks ago, I was led, by buſineſs, to the weſtern extremity of this county, at Leader foot, to which I went by Kelſo, St Boſwell's, and Melroſe, and back by Mellerſtain, Greenlaw, and Dunſe, by which I ſaw near 70 miles of country. To my view, things by no means looked well. Wherever the land is ſtrong, or on a cold retentive bottom, the crops of corn and graſs were wretched, and the paſture miſerable. On dry-bottomed turnip ſoils, every thing looked well, but late. Since my return home, however, the crops on the laſt kind of land in my neighbourhood are puſhing forward faſt. Turnip work is backward, from the late Spring and worn-out ſtate of the horſes; but it works famouſly. Without rain ſoon, I fear a great loſs in that crop, as the *quicken* requires much working, which dries the ſoil ſadly. Annual weeds everywhere abound far beyond common. Generally ſpeaking, my farm is dry land; and where the culture has been legitimate, the crops are excellent. Some that I got laſt year from the hands of a ſmall farmer, one of your favourites of the theoriſt, and which I had to manage as I beſt could, till I worked to windward, is poor enough, yet better than the beſt managed cold bottomed. Hay crops on cold land, and all that was late eaten, does not offer any decent proſpect.

On

On good dry land, Winter and Spring hained hay looks well; but of these there is very li tle in this part. In Berwick bounds, a ſhilling the ſtone of 24lb. has been refuſed for hay from the rick: Not that any is yet cut; but I believe I ſhall begin to cut next week."

Eaſt Lothian Quarterly Report.

The weather which, in April, was friendly to vegetation, has during the greateſt part of the two ſucceeding months, been remarkably cold and tempeſtuous, and the growth of corn and graſs has conſequently received a ſevere check: this, when added to the critical ſtate of the ground, from the exceſſive wetneſs of laſt Winter, and the imperfect cultivation which circumſtances, in too many caſes, only allowed to be given, renders it highly probable, that the current crop will be much inferior to thoſe of ordinary years.

A conſiderable leſs quantity of wheat was ſown this year than uſual; and, perhaps, three-fourths of it was put into the ground during the mounths of February and March. The appearance of the greateſt number of fields is ſuch, that a ſhort crop of this grain may be expected. Barley, upon dry healthy ſoils, is a tolerable crop. Some of it is already fully in the ear, and, upon the coaſt ſide, may be ready for the ſickle in Auguſt; but, upon thin clay, and ſoft mooriſh ſoils, it is hardly off the ground, and is, almoſt in ever caſe, ſickly and unthriving. Oats are looking better in the inland parts of the county than for ſome time paſt, the blanks occaſioned by the grub being partially filled up; but upon the dry coaſt ſide land, where they lately diſplayed a vigorous growth, the drought has injured them ſeverely Beans are worſe this year than uſual, eſpecially upon cloſe-bottomed ſoils, being generally thin, unhealthy, and getting into bloom before they are arrived at any length. Peas, upon clean lands, look well; but, as the quantity ſown is very trifling, their effects hardly deſerve to be noticed in an eſtimate of this kind.

The hay crop, except upon the dry healthy land, is very light, and in few place will exceed 150 Scots ſtones per acre. Some of it is already cut, and will be of fine quality, if dry weather continues. Some fields have been ſet at 12l. to 15l. per acre; but no price from the rick is yet ſettled, though 1s. per ſtone is ſpoken of. Preſent price of old hay 18d. but little remains on hand.

The paſtures are generally very bare; and without warmth and temperate rains, will not afford a full bite this ſeaſon. The early ſtocking contributed to nip them up at the ſtarting; and the cold eaſterly winds blaſted the young plants, extracted the moiſture ne-

ceſſary for their growth, and hardened the ſurface ſo much as to prevent their future progreſs.

The potatoe fields never looked better; and promiſe ſtubſtantial relief to the poor, during the following year. Much the ſame extent as uſual is planted in this country; but the ſhow being univerſally good, a double crop to that of the laſt may be ſafely expected. Notwithſtanding the apparent badneſs of the ſeed, ſcarce a ſingle blank is ſeen, and the *curl* is only in a few inſtances diſcernible. Perhaps the abſence of this fatal and common diſeaſe may be attributed to the unripeneſs of the plant when taken up laſt Autumn, which is the only probable cauſe that can be aſſigned. In the high diſtrict of this county, where the climate ſeldom permits them to arrive at maturity, the *curl* is ſcarcely known; whereas, in the low diſtricts, it is never miſſed after an early harveſt, unleſs freſh ſeed is brought from late ſituations.

Though the coldneſs of the weather has been injurious to the growing crops, it has proved very advantageous in the working of the turnip and naked fallows, which have this ſeaſon received complete juſtice. The repeated dry furrows given, will, in a great meaſure, counteract the bad effects of the laſt Winter, and remove the degree of acidity thereby lodged in the ground. Without moiſture, however, the heavy lands will be all to *force* with the brake and roller; for they are ſo hard, that, without theſe auxiliaries, it will be impoſſible to reduce them to a proper tilth. Perhaps this is the manner in which the moſt of farmers incline to work their fallow, though it is ſevere upon the labouring ſtock, and increaſes the expence of this neceſſary operation.

The quantity of land ſown with turnip, is this year greatly increaſed; but, if ſufficient moiſture does not ſoon fall, one half of them will not vegetate. Seed has been exceedingly ſcarce, and, in ſome places, could with difficulty be procured. The early ſown fields promiſe well, and ſome are already thinned and ſet out: but the greateſt number are either ſpringing imperfectly, or making no appearance. Much loſs was ſuſtained upon the ſoft ſoils, from the drills being blown by the high weſterly wind on Friday the 20th current.

The grain markets have fluctuated much in the courſe of this quarter, eſpecially for wheat and oats. Wheat has, for a month paſt, ſteadily advanced, in the face of a large importaion; which is a ſure proof that the quantity on hand, of laſt year's crop, is not great. Current prices are from 50s. to 60s. per boll of 4 firlots, the firlot being about 3 per cent. larger than the Wincheſter buſhel. Beans, per ſame meaſure, from 46s. to 53s. Barley, per boll of nearly 6 Wincheſter buſhels, from 50s. to 56s. And oats, which

at

at one time, were as high as 57s. per boll, of ſame ſize, have, for ſeveral weeks, ſold at 48s. and 51s.

The demand for fat cattle has fully equalled the number fit for killing; but prices, owing to inferiority of quality, and the plentifulneſs of lamb, have of late decreaſed from 15 to 20 per cent. In the middle of May, decent beef was worth 12s. 6d. per ſtone of 17½ lb. ſinking the offal; but it now may be conſidered as not exceeding 9s. upon an average. Mutton is rather lower. Lamb, if good, much the ſame price as mutton. From the barrenneſs of the paſtures, it does not appear that beef, in this diſtrict, will be plentiful during the ſeaſon.

Gifford Summer fair (the only one of conſequence in this county) was well attended; but the demand for lean ſtock was very limited. Few good horſes were preſented, and a great number of ſheep remained unſold.

An unuſual quantity of yellow weeds infeſt the greateſt part of the arable fields this ſeaſon, which from the ſtrong drought, will prove pernicious to the ſeveral grains with which ſuch fields are occupied. Even the clays are full of them. Perhaps their increaſe is owing to the wetneſs of laſt Summer, and the repeated black froſts which prevailed from December to March. The ſtrongeſt ſoil was thereby looſed to ſuch a degree, as enabled the ſeeds of theſe weeds at once to vegetate, after the ground was reduced by the harrow in ths Spring months.——*June* 30.

Extract of a Letter from a Gentleman in the neighbourhood of Perth, dated June 28.

"The wheats in this diſtrict are generally conſidered as a light crop, and rather more backward than uſual. The oat crop upon wet ſoils has failed much; and, in ſome places, the grub-worm has done a good deal of injury where the ground is dry: oats are tolerably good. The growth of barley is not ſo far advanced as to admit the forming of a preciſe opinion reſpecting that crop, eſpecially upon ſtrong ſoils. Beans appear to be a ſcanty crop.

The markets are not well ſupplied with grain; indeed, we have little or none, but what is brought from aboad. The price of oat meal is 3s. 2d., and barley 2s. per peck, of 8lb. Dutch weight Bread is not ſold in this county by the quartern loaf, as the weight varies according to the markets, but not the price. Hay is 1s. 6d. per ſtone of 22lb.; and as to the wool, I have not been able to learn, with any degree of certainty, the different prices, as the ſheep are but newly ſhorn.

I am rather of opinion, that there are not ſo many acres ſown with grain this ſeaſon as uſual; but think the potatoe fields conſiderably enlarged: in general, they make a promiſing appearance

The butcher market in Perth is but indifferently ſupplied. Principal pieces of beef ſell at 9d. per Dutch lib.; but there is little of good quality to be got. Lamb 9d.; veal 8d.

As to the crop of graſs; the hay fields are very light, and the paſtures much inferior to what they are in ordinary years."

Extract of a Letter from a Reſpectable Houſe in Glaſgow, dated June 30.

" We ſhall endeavour to give you as accurate accounts of the current crop in this neighbourhood, and of the markets here, as in our power. In the vicinity of our city, the lower ward of Lanarkſhire, there is little variation in compariſon with laſt year, reſpecting the forwardneſs of the crop. We have only a ſmall quantity of wheat ſown this ſeaſon, and it looks worſe than common. Not much barely is ſown; but the length it has come, only enables us to ſay, that the braird is middling. Such parts of the oat fields as were early ſown, look tolerable; but all the late fields have a very poor appearance. Beans, in general, look well. There never was ſuch a quantity of potatoes planted here: in general, they are very late, a great part of them only coming above ground, ſo that the curl cannot be diſtinguiſhed. No contracts for a future delivery are yet made.

The few turnips cultivated here are in drills; but the quantity is ſo trifling, that they are not worth mentioning. Hay has a poor apearance, and promiſes, at moſt, to be only a middling crop. Preſent prices of old hay are from 1cd. to 1s. per Tron ſtone of 22 lb. The paſture graſs is very poor. Cattle, ſheep, and lambs, all ſell at high prices; and the retail price may average 1s. per lb. Tron weight.

We have had little or no grain imported *direct* to this market, as it is entered in general at Borrowſtounneſs Cuſtomhouſe, when ordered from the Baltic, and forwarded from thence in lighters. Such cargoes as are received from America and Ireland, are entered here; but there have been none imported from the former country as yet, except two cargoes of wheat, which were afterwards ſent to the Iriſh market. About 5000 barrels of flour have been received from America, which ſold from 70s. to 75s. per barrel of 196 lb. We have had no particular information reſpecting crops to the weſtward, but believe they look very middling.

Our

Our current prices here are,

Scotch Wheat	48s. to 55s.	per boll.
Barley	40s. to 48s.	
Bear	35s. to 42s.	
Oats	40s. to 45s.	
Beans	none.	
Oat meal	46s. to 54s.	
Foreign Wheat	52s. to 65s.	
White Peas	63s. to 70s.	
Oats	42s. to 45s.	
Engliſh Wheat	50s. to 60s.	
Barley	45s. to 54s.	
Beans	52s. to 56s.	
Peas	60s. to 63s.	
Oats	45s. to 54s.	
Flour	100s. to 105s.	per ſack.

Our wheat is all meaſured by the Linlithgow ſtandard firlot, which is a trifle above Wincheſter; but the meaſure for beans is about 7½ per cent. larger than the Linlithgow ſtandard. Oats and barley are ſold by the Stirlingſhire boll; that is to ſay, our boll of theſe two grains is nearly one peck more than ſix Wincheſter buſhels."

Extract of a Letter from a Farmer in Aberdeenſhire, dated June 26.

"Cattle in good condition ſtill ſell high, though not ſo dear, by 1s. 6d. per ſtone, as in the month of May; but lean cattle are almoſt unſaleable, on account of a want of graſs. Our grain crops, on light lands, look much better than the badneſs of the braird led us formerly to expect; but cold and backward ſoils are as yet making a bad appearance, and I am much afraid that the crop upon them will turn out very indifferent. As for the hay, it is hardly worth the cutting; and the paſtures are exceeding bad, owing, in a great meaſure, to the ſtate of the weather, which continues cold and dry. Our turnips are about all ſown; and we have been favoured with a famous ſeaſon. A greater quantity of ground has been prepared for this branch of huſbandry than uſual. There is not ſo great apprehenſions entertained now about a ſupply of grain as lately: but, as the crop will be late, eſpecially if growing weather does not ſet in, there neceſſarily muſt be a greater degree of ſcarcity before harveſt than has yet been felt. Potatoes are this year planted to a great extent, and appear to do well, which will be the firſt ſubſtantial relief to the diſtreſſed poor. You would be aſtoniſhed at the ſmall quantity of meal which is conſumed, even in large families,

milies, at this time, ſince milk became plentiful. Indeed, it makes good the old ſaying, That *want* is an excellent maſter for teaching economy.

I ſhould have mentioned, that, of all our crops, *barley* and *bigg* are looking beſt: and an increaſed quantity of theſe varieties are ſown this ſeaſon in the whole of Aberdeen and Banffſhires; which will make amends for a ſcanty crop of oats. I am afraid that *winter keep* for cattle will not be plentiful, unleſs a great alteration for the better ſoon takes place. In Murrayſhire, the crops, upon the whole, look well; but they are ſadly in want of rain. As for graſs, they have little or none; and if the dry weather continues, I think they may have an early harveſt, but that the crop will be ſhort."

Mid-Lothian Quarterly Report.

From April 1ſt to June 30th, inclusive.

There have been few ſeaſons wherein the operations of huſbandry have met with leſs interruption than during the time above ſpecified. The weather, although by no means remarkably genial, has always allowed the farmer the full uſe of his cattle and implements; and tillage, of courſe, has been carried on with ſpirit and vigour. The appearance of the crop is, however, not altogether ſo promiſing, as the favourable ſeed-time ſhould have led one to expect. The wheat, as formerly noticed, ſown in a very unfavourable condition, continues ſtill feeble and languid, and, hardly yet beginning to ſhew the appearance of the ear, gives room to expect a late harveſt, as well as a ſcanty return. The hay-lands are in general defective in clover, which alone would have the effect to make a light crop; were it not even ſtill further diminiſhed in bulk, from the ſtinted growth of the other graſſes, owing to the intenſe drought, accompanied with a conſiderable degree of cold, which has diſtinguiſhed the commencement of the Summer ſeaſon. The bean and peas crop is very diſſimilar, part being excellent, and part very bad; owing, perhaps, to the previous ſtate of the ſeed when ſown. On the other hand, the barley, ſown in capital order, may ſtill be a good crop, ſhould ſuitable rains arrive in time; as would likewiſe the oats, if the ſame much wiſhed-for occurrence takes place. The potatoes appear to be good; and, what is an agreeable circumſtance, more of them have been planted than uſual. Turnip has been ſown to a conſiderable extent, and the land in fine condition: a moſt boiſterous ſtorm, however, from the north-weſt, on Friday June 20, is ſaid to have occaſioned much damage to this root, as well

well as to other ſpecies of crop. But *farmers are always complaining*; which is the more unreaſonable at the preſent moment, when we have it officially announced, as uſual, in the newſpapers, (founded on many well authenticated auguries from bee-hives and bird-neſts), That the preſent crop is to be the GREATEST IN THE MEMORY OF MAN.

Prices continue not only high, but to increaſe: Of this, however, the farmers can now clearly waſh their hands, as not one of them in twenty has a ſingle grain to diſpoſe of. To the port of Leith, the country now turns its eyes. The importation there has, happily, been very extenſive; and, there is room to hope, will be able, at whatever price, to inſure from famine; particularly owing to the exertions of the Friendly Societies, who have imported almoſt one fiftieth part of the whole.

The following have been the current prices of grain, &c.

	April.	*May.*	*June.*
	Sbil.	*Sbil.*	*Sbil.*
Wheat, per boll, from	47 to 50	44 to 55	48 to 60
Barley, ditto	43 — 50	50 — 52	48 — 52
Oats, ditto	43 — 53	40 — 45	42 — 46
Beans and Peas, ditto	44 — 50	45 — 50	46 — 50
	d. *d.*	*d.* *d.*	*d.*
Oat-meal the peck,	35 — 42½	38 — 42	38

Potatoes, during ſeed time, as high as 2s. 6d. the peck; and even for the table have ſince not been under 2s.

Butcher-meat was alſo uncommonly dear, having gone as high as from 10d. to 12d. the lib.; but, of late, from the influx of lamb and other graſs fed meat, is become more moderate. But nothing appeared ſo extravagant in price as freſh butter, which, during the months of April and May, ſold at from 20d. to 2s. the lib. of 22 oz. Aſſociations were repeatedly endeavoured to be formed to reduce its price, by refraining from the uſe, but to no purpoſe; for, although this conſpiracy and combination was openly recommended from the newſpapers, yet the rate continued undepreſſed, till, in the courſe of the ſeaſon, (from the return of good paſture increaſing the quantity), the price was reduced through natural means. It ſells now at from 1s. to 16d.

Return

Return of grain of all kinds, flour, meal, and hulled barley, imported and exported at Leith, from February 23d to July 5th inclusive. The whole reduced to quarters, of 8 bushels each, reckoning a ton of flour equal to 7 quarters of wheat; a ton of hulled barley equal to 8 quarters of barley; and 4 bolls oatmeal equal to 3 quarters of oats:

Week ending	*Imported coastways.*	*Imported foreign.*	*Exported coastways.*
March 1.	1654	none	93
8.	2297	none	976
15.	3560	none	815
22.	2403	none	667
29.	1048	none	466
April 5.	1742	none	558
12.	1900	none	821
19.	1367	none	1006
26.	7261	none	1322
May 3.	5307	1176	408
10.	3586	2860	1238
17.	5566	3343	2040
24.	8977	5837	2782
31.	5812	4435	2288
June 7.	3220	2972	3786
14.	1056	2771	1747
21.	936	2284	1220
28.	2202	8350	2656
July 5.	656	3180	1809
Total	60,550	37,210	26,699

Coastways	60,550
Foreign	37,210
Total	97,760
Deduct exported	26,699
Remains	71,061

It is computed, that the city of Edinburgh, town of Leith, and adjacent suburbs, consume weekly, in bread corn of all kinds, about 3000 quarters; and, for several weeks past, besides what is exported by sea from Leith, there have been about 1000 quarters weekly sent from thence, by land-carriage, into the interior of the country.

ENG-

ENGLAND.

Extract of a Letter from a Correſpondent at Hull, dated June 20.

Our wheat market has of late been ſupplied with foreign grain, of which the importation is conſiderable. Beſt Dantzic ſort ſold on Tueſday at 126s. per quarter, of 8 Wincheſter buſhels which, the preceding week, fetched only 120s. Inferior qualities from other parts down ſo low as 100s.

Oats.—Few at Market. None ſold this week: but prices on Tueſday ſe'ennight were from 44s. to 57s. Beans, none on hand. A few pidgeon beans ſold laſt week at 78s. Rye 90s. to 95. Hay from 5l. to 6l. per ton.

Butcher meat very variable. The average may be, for pork 6½; mutton 7½d; beef 9d; veal 7d.; all per pound of 16 ounces. Beef to ſhips, taking the whole carcaſe, 68s. per cwt.

Flour.—Fine 5s. 6d. to 5s. 8d. per ſtone of 14lib. Bread 4s 10d. per ditto. American ſuperfine flour, in barrels, ſold to private families at 75s. per barrel, containing about 14 ſtone. Potatoes 1s. 3d. per peck; they were very ſcarce both with the farmers and dealers. New crop from 8d. to 1s. per pound weight.

Wool.—It is hard to ſpeak reſpecting the price of this article. The farmers aſk from 21s. to 25s. per tod of 28½ lib.; but none is as yet ſold higher than 22s.

Lintſeed, 63s. per quarter.
Rapeſeed, £21. 10s. per laſt.
Lintſeed cakes, 10l. 10s. per ton.
Rapeſeed ditto, 7l. per ditto.

Graſs on ſheltered and dry lands promiſes well. On low or flat lands, where the water covered it in Winter, very indifferent. If warm weather commences ſoon, and moderate rains follow, there is no fear of a full bite.

Wheat has the worſt appearance of the ſeveral grains. In low lands it is ſtarving; but ſome of the dry ſoils have a promiſing appearance. Upon others it is indifferent, and much injury has been ſuſtained by the ſlug. This as well as other grains, ſtands much in need of warm weather. A deal of bad ſeed was ſown, which did not vegetate; and moſt of farmers think, that from one half to three fourths of a good crop is all that can be expected.

Oats

Oats look tolerably well. Beans beſt of all. Barley only middling.

Milk ſell at 2d. per quart, equal to a chopin of your ſpirit meaſure. Butter 1s. per lib. of 16 ounces.

In our future communications, we truſt we will be enabled to tranſmit you more extenſive intelligence; and be aſſured, that, in the above particulars, we have ſtudied correctneſs to the uttermoſt of our power-

Lincolnſhire Quarterly Report.

The ſtate of the growing crops of corn in this county is as follows: Wheats are very thin, and much inferior to what they have been for ſeveral years. A great many of the plants periſhed during the Winter months, which gives cauſe to fear that the preſent crop will be a deficient one. Spring grains are, in general, much as uſual. Barley and oats have a promiſing appearance, with the exception of the marſhes; for, in ſome parts of theſe, the condition of the crop is truly melancholy, having, in the firſt inſtance, been nearly deſtroyed by the coldneſs and wetneſs of the ſeaſon, and latterly by the attacks of the grub-worm. It is an abſolute fact, ſurpriſing as it may appear, that ſome farmers in theſe ſituations would at this time take conſiderably leſs for their crop than they gave for its ſeed. Beans and peas do not look ſo well as in ordinary years. Perhaps, taking the whole county, the crop, upon an average (making the above exceptions), may be conſidered nearly as good as uſual.

The crops of artificial graſs are not likely to be productive, on account of their growing in an irregular patched manner, having ſome parts well ſtored with plants, while others are naked altogether. This is pretty general, and can only be attributed to the wetneſs of the weather; for, if the ſeed had been bad, the effects would have been uniform. The natural meadows, it is to be hoped, will make up for the failure of the artificial graſſes, as they, upon the whole, make a luxuriant appearance.

Fat beaſts are ſcarce, and feed very ſlow, which is owing to the extreme coldneſs of the weather. Some of the paſtures are quite ſtarved, and, of courſe, very deficient of graſs. Fat ſheep are coming to be tolerably plentiful. Preſent prices of butcher-meat: beef 8½d. to 9d. per lib.; mutton 7d. to 7½d.; veal 7d. to 8d.; lamb 8d. to 9d. Of the laſt article, not many have been ſlaughtered this ſeaſon.

The prices of grain are, wheat from 115s. to 120s. per quarter; barley 50s. to 70s.; rye 70s. to 80s.; oats 49s. to 56s.; beans 80s. to 90s.; all Wincheſter meaſure.

The

The clippings of ſheep, or ſhearings, are now going on here; but the fleeces, in general, are thought to be lighter than laſt year. The prices are not yet aſcertained; but 25s. per tod of 28 lib. is expected. Ewe wool is ſuperior in quality to that of laſt year's growth.

Potatoes promiſe to be an excellent crop; and it is hoped that the goodneſs of this valuable eſculent will, in a great meaſure, compenſate for the apparent deficiency of the wheat crop.

The ſowing of turnip has been general throughout the county; and, ſhould the weather continue dry, good crops may be expected, where tolerable management has been practiſed. The broadcaſt method of ſowing is cuſtomary in this county; and, when the manure is ploughed into the ground the ſame day it is laid on, it is found to anſwer beſt.

The ſmall farmers of this county have ſuffered exceedingly from the late calamitous ſeaſon, eſpecially thoſe upon the low fen lands, wet clay and heath ſoils, where their crops were not only deficient, but the grain of a bad quality. It is not to be ſuppoſed, but that the large farmer has had his ſhare of the general calamity; yet from his extenſive capital, he has been able to remedy the evil, by gaining in one way, what he loſt in another; which was not the caſe with the ſmall farmer, with whom all was loſs.

Pariſh rates have become alarmingly high, partly from the dearneſs of proviſions, and alſo from the increaſing habits of luxury and extravagance among all ranks. This is alone what will bring ruin upon this happy and fertile land. Pity that luxury could not be checked before it has taken too deep a root; and that the primeval plain honeſt induſtry of our anceſtors could not again be introduced. This, combined with their good morals, would lay ſuch a foundation of real national wealth and proſperity, as would baffle all the attempts of our moſt inveterate enemies to undermine.——*June.* 20.

Extract of a Letter from Ripon (Yorkſhire), dated June 29.

'You may be aſſured of every exertion in my power being uſed, to promote the laudable undertaking in which you are engaged. I now tranſmit a ſhort account of our crops and markets. The wheats in this neighbourhood are in general very unpromiſing, and ſpring crops very backward it their growth. Hay appears to be a good crop, and ſome of it is already cut down. The paſtures are alſo good upon the whole. We are buſy with our turnip ſeed, which is here moſtly done according to the drill ſyſtem, though not the common way in this county.

On

Our market this day is as follows:

Wheat,	16s. 17s. and 17s. 6d. per buſhel.
Maſlin,	13s. and 14s.
Beans,	11s. 6d. 12s. and 13s.
Oats,	8s. and 9s. 6d.

Our buſhel is a trifle larger than Wincheſter meaſure.
Old potatoes, 6s. per buſhel, and very ſcarce.
Milk cheeſes, 4½d. per lib. avoirdupois.
Butter, 48s. and 49s. per firkin of 56 lib. ditto.
Long wool, 14s. to 16s. 6d. per ſtone of 17 lib.
It is chiefly long wool which is grown in this diſtrict.

Extract of a Letter from a Yorkſhire Farmer, June 25.

'The weather having of late been rather warmer, attended with ſome ſhowers, occaſions our corn fields to aſſume a better appearance; and, where the plants are thick enough, a fair crop may be expected. Hay upon good land, tolerable; but, upon ſoils of inferior quality, very indifferent. Paſtures, upon the whole, but middling. Lean beaſts and ſheep ſelling pretty well. Fat ſtock has rather declined in Price; but I don't apprehend the fall will be conſiderable. Owing to a dulneſs of trade, and to a want of foreign remittances, wool has not advanced ſo much as expected. Have only got 6d. per ſtone for mine above laſt year's prices, being 13s. per ſtone of 15 lib.: my ſheep are of the new Leiceſter breed. Some have ſold at 14s. and 15s.; but theſe are not general prices for long wool. Short wool from 9s. to 20s. The firſt, of the coarſe Scottiſh kind, the others from ſheep bred on our moors and commons.

Our markets at Wakefield and Pontefract, for the following articles, are:

Wheat,	45s. to 50s. per load of 3 buſhels.
Beans,	35s. to 36s.
Oats,	55s. to 63s per quarter.
Barley,	ſcarce any of it fit for human uſe, and little elſe to ſell.
Turnip ſeed,	2s. to 2s. 6d. per lib.; very ſcarce, a great quantity being ſown this ſeaſon.
Rape duſt,	28s. per quarter.
Beef,	8d. to 10d. per lib.
Lamb and mutton	8d.
Veal,	7d.
Fine long wool, from	12s. to 15s. per ſtone of 15lib.
Fine ſhort,	15s. to 20s.
Coarſe,	9s. and upwards as in quality.

Norfolk,

Norfolk Quarterly Report.

The backwardneſs of the laſt harveſt retarded the wheat ſeed, and the unfavourableneſs of the after weather prevented the cultivation given from being equally good as in better ſeaſons. Some wheats were therefore delayed till the Spring months, which is never reckoned ſo good, either in quantity or quality, as thoſe ſown in Autumn. The cultivation of the Spring crops was, however, as good as in the average of ſeaſons, and the extent ſown is nearly the ſame as uſual; our mode of cropping preventing any material deviation. Both drilling and dibbling are certainly increaſing in practice, being found highly beneficial.

A much greater quantity of potatoes are planted this year than common; and many farmers are forward in their turnip ſeed; ſome have a half, others a third ſown. The drill ſyſtem is not much followed, though it has been found to anſwer well, where properly conducted.

The appearance of the growing crops, as in all years, is extremely various, owing to a multitude of cauſes. The wheats are much mended in thoſe places where they lately looked worſt, and a very conſiderable part are as fine as in any ſeaſon. Peas look remarkably fine, and bloom well. The barley and oats are alſo good, promiſing to make an abundant return; and, in forwardneſs, are much the ſame as in the beſt of years. I underſtand the grub has done much damage in ſome parts of the county, more than uſually happens.

Graſs of all kinds is a great crop, and hay harveſt is now generally in hand. Some fields are ready for the ſtack; as yet, no price is fixed. Our markets for beef and mutton are very bare; the former ſells at the enormous price of 10s. and 10s. 6d. per ſtone of 14 lb; the latter at 8d. per lb., and none really fat to be met with. The lambing ſeaſon proved remarkably favourable; ſeldom equalled, and never exceeded, in this diſtrict.

At our market yeſterday, the little wheat that appeared experienced a further riſe of 2s. or 3s. per quarter; the millers were the only purchaſers. Barley, oats, and peas, are exceeding ſcarce, and fully maintain their prices. Fine wheat, 134s., runs 116s.: Fine barley, 72s.; ſeconds, 60s.; oats 52s. to 56s.; beans 74s. to 76s. per quarter of 8 Wincheſter buſhels.

An Agricultural Society has lately been eſtabliſhed at Lynn, whereof Thomas William Coke Eſq. is choſen Preſident, and the Earls Cholmondely, Spencer, Montrath, Clermont; Lords Walpole, Petre, Wodehouſe; Sir Richard Bedingfield, Sir Henry Lambert, and Sir Martin B. Folkes Bart. Vice-Preſidents. The

purpoſes of the Inſtitution are, the collecting of uſeful information, tending to the acquiſition of a more perfect knowledge in agriculture; breeding of every kind of ſtock, grazing and planting; and, for attaining theſe objects, premiums are to be offered.

Two general meetings of the Society are to be held annually, viz. at Swaffham, on the day preceding Thetford wool fair; and the other at Lynn, on the Wedneſday neareſt the 20th of February.

Yorkſhire Quarterly Report.

The crops of wheat, in general, are more improved in their appearance than was expected by many. The ſtraw promiſes to be ſtrong on the ground; and, if the ears correſpond with it, this grain may yet have a fair average produce, notwithſtanding the thinneſs of moſt of the crops, and the utterly defective ſtate of many of them. Barley and oats appear a full crop in many inſtances. The beans, peaſe, and vetches, have reaped all the advantage from the late ſhowery weather, ſo favourable to theſe articles, that could be reaſonably expected from the bad and unpromiſing ſtate of the ſeed; yet many of them plant very thin, and ſcarcely any can be abundant. During the laſt two weeks, the mowers and haymakers have been buſy with the graſs, of which a part has been already hayed and ſtacked in different parts of the county. The produce appears abundant on the dry and well-manured ſoils; on the ſtrong and cold ſoils, by no means ſo. Clover is late in flowering, but generally a full crop; very little is cut at preſent. Potatoes look uncommonly well; are nearly, if not perfectly, free from the curl, and bid fair for a good ſupply of that uſeful root, at a time when every article of human ſubſiſtence will, in all probability, be peculiarly wanted. Flax, on dry ſoils, is promiſing, but has ſuffered much from worms, &c. on the ſtiffer ones. Of rape, there is a proſpect of an average produce. Yams, clover, and other ſeeds, plant thick and well.

Fallows.——From the cloudy and heavy ſtate of the weather, of late, the turnip fallows, on ſoils not of the drieſt quality, are in a backward condition. Some of the beſt lands are however ſown; but much remains to be done on the generality of them, before they can be in proper tilth: the preſent fine weather will aſſiſt the cultivators to finiſh this work in a very ſhort time. The Summer fallows are, of courſe, in no great degree of forwardneſs.

Prices of Grain——The beſt ſamples of wheat command high and advancing prices, 18s. 6d.; barley at 8s. 6d.; and oats 7s. 6d. per buſhel of Wincheſter.

Butcher-

Butcher-meat.——The beſt beef from 9d. to 1s.; mutton 8d.; and veal 7d. per lb. of 16 ounces.

Cattle and Sheep——Both fat and lean are at high prices, particularly the fat; perhaps no very conſiderable reduction of the price of theſe may take place ſoon, notwithſtanding its preſent exorbitance.

Horſes.——Good ones, both for the ſaddle and draught, are ſcarce and dear.

June 7.

Extract of a Letter from Stafford, June 25.

"I have been in London for a month paſt, and, on my return, had the ſatisfaction of obſerving that the crops in the midland counties promiſe to yield great abundance. On Monday, my hay-harveſt commenced, which will yield me a greater crop than I have got four years paſt. The weather is good at this time; and, if it continues, we ſhall ſoon get it into the ſtack. Wheat, barley, and oats, have all a fine appearance; and the tares, which I had from London at 20s. per buſhel, beſides carriage, promiſe to be a moſt luxuriant crop. We are now buſy with our turnip-ſowing; but ſeed is exceedingly ſcarce, and at an extravagant price. I paid 2s. per lb. for it, and uſed, in former years, to have it for 8d. and 10d. I have made every inquiry reſpecting the ſtate of our markets. On Saturday, prices were, for wheat 20s. to 22s.; barley 9s. to 10s. 6d.; oats 9s. to 9s. 6d.; beans 13s. to 14s. per buſhel of 38 quarts; beef 7d.; lamb 6½d.; mutton 7d.; veal 5½d. per lb. of 16 ounces. I have finiſhed the ſhearing of my ſheep and lambs, and have been very ſucceſsful in the latter this ſeaſon, having only loſt two out of all my ſtock, which is of the large Leiceſter ſort. The wool is coarſe: I have been offered 25s. per tod of 30 lb., and 10d. per lb. for lambs wool; but, as higher prices are expected, have not ſold. Next Saturday is our fair, when I ſhall be better able to inform you of the price of every article, though I doubt it will be too late for your next Number.

During the time I was in London, I viſited Mr Adam's farm at Streatham, which is well worth the attention of every farmer. He has one of Mr Meikle's thraſhing-machines, and ſeveral other curious inſtruments for agricultural operations. I likewiſe ſaw a number of new invented huſbandry inſtruments, at M'Dougal's in Oxford Road, with which I was highly gratified."

Extract of a Letter from London, June 30.

"I have not yet been ſucceſsful in opening a correſpondence for you in the ſouthern counties of Hants, Suſſex, &c. but have the promiſe of reports for your next number. The wheat crops in Middleſex look but very indifferent; moſt of the ſoil being

a ſtrong clay; the continued cold weather injured it much; in many places, there will not be half a crop. The field that you ſaw laſt Summer in fallow, near Moor Park, is ſo very bad and thin, that beans have been planted upon a great part of it, to make up the crop; the other half of the field is this year under Summer-fallow, and in as bad order as what you ſaw laſt year. The beans and peas, in general, promiſe to be an abundant crop, and the few oats ſown are good: little or no barley is grown in this county. In Hertfordſhire, the wheats, upon the whole, appear to be good, and are much more forward than in Middleſex, being now all ſhot and in bloom; while many of the Middleſex fields have the ear ſtill locked up in the blade. In Surry, the wheats are good; the oats and barley alſo look well; and ſeveral fields of rye are ſo forward, that if the preſent fine weather continues, we will not be long in having new grain at market. The huſbandry round the metropolis, is much in the ſame ſtate as uſual at this time of the year. In Middleſex, which I have had more opportunities of examining than the other counties, the fallows are badly managed; they don't appear to have been croſs-ploughed, and are ſo full of couch, that the furrows are as green as a corn crop in the month of March. For three months paſt, our markets have been advancing, notwithſtanding the large importation of foreign grain; of late, the quantity of fine Engliſh wheat at market being ſmall, and the quality of the foreign being ſo indifferent, that but a ſmall proportion of it can be mixed with the other in grinding, has occaſioned fine ſamples to advance conſiderably. Good oats, from the ſame cauſe, are likewiſe advanced; while ordinary qualities, both of wheat and oats, have a very dull ſale.

From the great demand from the north for the laſt two months, the prices of barley, hog peas and beans, have riſen conſiderably. Smithfield market has been well ſupplied for the laſt three months; but, owing to the great demand for the navy, &c. prices at times have been very high. Vegetables of every kind have been ſold in Covent-Garden market for ſix weeks paſt; and, with green peas and other vegetables, are now in abundance; as are alſo ſtrawberries, cherries, and currants. The hay crop round London is very good, and, having a fortnight of fine weather, a great part is got ſtacked in excellent condition. The look of the hop vines in Kent, at preſent, is unfavourable. The duty is only eſtimated at 90,000l., which, ſome time ago, was thought might reach from 150,000l. to 200,000l.; but if the fine weather continue, the crop may be conſiderably better than what appearances indicate.

State

State of the ſeveral Markets this day.

MARKLANE.

Foreign wheat, 100s. to 130s.
Engliſh ditto, 120s. to 153s.
Oats, 44s. to 58s.
Stained barley, 46s. to 56s.
Kiln-dried ditto, 50s. to 60s.
Fine malting ditto, 60s. to 73s.
Malt, 57s. to 80s.
Hog peas (laſt week), 90s. to 100s.
Tick beans, 66s. to 76s.
Small ditto, 80s. to 86s.
—all per quarter of 8 buſhels Wincheſter.
Flour, 5l. 10s. per ſack of 280 lib.
Bread, 18¾d. per quartern loaf.
New potatoes, 15s. per cwt. retailed at 2d. and 2½d. per lib.

SMITHFIELD.

Beef, 5s. to 6s. Lamb, 5s. 6d. to 7s.
Mutton, 5s. to 6s. Veal, 4s. to 4s. 6d.
Pork, 5s. to 6s. 8d. by the carcaſe.

Retailed Prices, per pound of 16 ounces.

Beef, 8½d. to 10d. Mutton, 8d. to 9d.
Lamb, 10d. to 1s. Veal, 9d. to 10d.

ST JAMES'S HAY MARKET.

New hay, 4l. 10s. to 6l. per load.
Old ditto, 4l. 10s. to 7l. 10s.
Clover ditto, 7l. 7s. to 7l. 10s.
Straw, 2l. 14s. to 3l. 3s.

Sheep ſkins, 3s. 4d. to 6s. 6d.; lamb ditto, 2s. 6d. to 3s. 2d.; ſhearlings, 1s.; clover ſeed, 24s. to 90s. per cwt.; white ditto, 40s. to 100s.; trefoil, 34s. to 56s.; rye graſs, 16s. to 24s. per quarter; turnip ſeed, 40s. per buſhel; rape ſeed, 46l. to 52l. per laſt; raw hides, 2s. to 3s. per ſtone of 8 lib.; market ſkins, 10s. 6d. each; horſe hides, 15s. to 16s. each; tallow, 3s. 8d. per ſtone of 8 lib.; hops, Farnham, 12l. 16s. to 14l.; Kent, 10l. 14s. to 13l.; Eſſex, 10l. to 15l. 10s.; Suſſex, 10l. 18s. to 15l.

The

The average Price of Corn, by the laſt returns, is

England.		*Scotland.*	
Wheat,	126s. 1d.	Wheat,	94s. 2d.
Barley,	66s. 8d.	Barley,	57s. 7d.
Oats,	48s. 7d.	Oats,	48s. 9d.
Rye,	88s. 7d.	Rye,	55s. 9d.
Beans,	76s. 8d.	Beans,	83s. 6d.
Peas,	79s. 8d.	Peas,	87s. 1d.
Big,	56s. 6d.	Big,	49s. 4d.

All per quarter, Wincheſter.

Oat-meal, per ſack of 280 lib. -	83s. 7d.	Oat-meal per boll -	43s. 8d.

There were imported, laſt week, into London, 2000 cwt. of bacon, 51 tons of beef, 1500 cwt. butter, 1000 cwt. cheeſe, 700 lb. of hops, 1266 quarters of oats, 3188 quarters of wheat, 1984 lb. Spaniſh wool, 1650 cwt. rice, and 300 tons of pork.

Extract of a Letter from a Farmer in Wales, dated June 26.

"I was happy to receive a copy of the Farmer's Magazine, and ſhall be proud if any information, in my power to communicate, contributes to promote ſuch an uſeful publication. Something of the kind is much wanted in this part of the kingdom, for we are far behind in point of improvement; and I know of no plan better calculated to ſpur on our farmers, than to let them ſee what is done by their brethren in other quarters.

We have here a great number of ſmall farms, rented from 20l. to 60l. a year, on which are kept from four to ten cows: and perhaps not more than ten acres of the drieſt ſpots are ploughed, yielding little more grain in a good year than is neceſſary for the ſupport of the farmer's family. At preſent, there is not one in five of the farmers of that deſcription, but what is under the neceſſity of purchaſing corn, and even many of a higher claſs are in the ſame ſituation. We have a few farmers who rent from 100l. to 500l. of land; but, in general, we don't like the plough, the expence being ſo great as to eat up all the profit; and, unleſs we can be brought to change our preſent cuſtoms altogether, it will never be otherwiſe. Our ploughing is chiefly performed with oxen; and the farmer who attempts ſending his team into the field with leſs than ſix of theſe animals, may lay his account with being the *talk* of the country. It is common to ſee eight large oxen in one plough, ſtirring the barley land; ſo that the very beſt land on the farm is employed in raiſing hay and paſture graſs, for the ſupport of the working ſtock. There are more horſes uſed of late than formerly,

merly, but four is the number uſually yoked. Two horſes in a plough was never heard of here till I came to this country; though, I think, under proper management, oxen might be employed with advantage; and I ſhall give reaſons in ſupport of this opinion, in a future communication.

A good deal of the land here is pared and burned, which is found to do well upon the old meadows. We don't pay much attention to dung, except when required for the turnip fields, which have of late greatly increaſed. Our chief manure is lime, with which this country abounds; the quality various. The general method is, to lime every fifth year; and the common rotation upon the dry land is, fallow, wheat, barley, clover, and wheat. This year, wheat after clover is looking better than after fallow, though the crop is in general very thin, and nothing like to what it was laſt year at this time: the late dry weather has been in its favour, and it looks tolerably healthy. Some fields are beginning to ſhow the ear. The dry gravels have the beſt appearance, as the wetneſs of April and May was beneficial to land of that deſcription; but the clays have ſuffered much, and, to all appearance, will not produce half a crop; the late ſowing, and the bad ſeed uſed, being much againſt it. Our markets are high for every article. Wheat is 48s. and 50s. per buſhel of 20 gallons (27 buſhels Wincheſter); barley 30s.; oats not to be got, oat meal ſells at 1s. per quart. but there is little uſed in this part of the country. Potatoes are very dear, both old and new; the latter ſold in Cardiff market, on Saturday, at 6d. per lib.; beef from 6d. to 9d.; mutton 8½d.; veal 6d.; lamb 6d.; dry bacon 14d.; butter from 10d. to 1s.; cheeſe of new milk 8d.: ditto of ewe milk 9d.; ditto of ſkimmed milk 6d.; all per pound of 16 ounces; hay 6l. per ton; ſtraw equally high in proportion. The crop of hay ſeems a middling one this year. The clover and rye-graſs harveſt is moſtly finiſhed, and we will ſoon begin to cut the meadows, which are generally ſufficient work till the corn harveſt arrives."

Northumberland Quarterly Report.

The crops upon dry ſoils are, in general, looking well; but upon clays,—ſtrong loams,—wet, and cold-bottomed lands, the appearance is very unpromiſing: a great failure has been occaſioned, on ſuch ſoils, by the deſtructive effects of the *Beetle Grub* *, particularly in the wheat and oats ſown upon clover leas. Many fields

* This Grub is from 1 inch to 1¼ inch, long of a browniſh grey colour. Some of them were put in a box with earth, and regularly fed, but have not yet made any change; others have been opened, and the embryo of the Black Beetle taken out of them.

fields have been so completely eaten off, that they have been ploughed up again for fallow; some were sown with barley, which has also been very much injured, and, in many places, entirely destroyed. The loss, I am afraid, is much more extensive than is at present imagined. A good deal will depend upon favourable weather, and a fine harvest; but, from present appearances, the crop, upon such soils, cannot be estimated at more than half of the usual average; and the harvest will not be early.

Turnips, sown the beginning of June, are looking very healthy; what have been sown the latter end of the month, and in July, want rain, to bring them forward, particularly upon adhesive soils, which were so saturated with wet last year, that they have wrought very unkindly for turnip fallow, and could not be brought to that mellow pulverized state, so necessary for the vegetation of small seeds.

Potatoes are looking well, and appear to have little of the curl.

Pastures have been very bad, and hay is expected to be a light crop, unless favourable rains come very soon.

The young clovers, in many places, have been much injured by the small grey snail.

The markets for fat stock were at their height about the middle of May, when beef was from 12s. to 13s. per stone, sinking the offal; and mutton 9d. per lib.; but have been coming down ever since. The prices of beef are now from 7s. to 10s. per stone, according to fatness, and mutton 7d. to 8d. per lib.

The wool-growers expected a considerable advance on last year's prices; but the buyers do not seem willing to give more, that is, 9d. to 10d. per lib. for long wool, and 1s. 1d. to 1s. 3d. for short wool. The fleeces take off very light; and the crop of wool, in respect to weight, is thought to be considerably under the average.

The corn makets have kept advancing. The present prices are,

Wheat,	14s. 6d.	per Winchester bushel.
Barley,	8s. 4d.	ditto.
Oats,	7s. 6d.	ditto.
Peas,	14s. 4d.	ditto.

Extract of a Letter from Newcastle, July 2.

"Our crops here, and in the neighbourhood, are far from being so promising as in the southern counties. The oat crop, in particular, looks ill; and, in many parts, the first sowing was ploughed down, and fresh seed sown. Our prices are, Conningsberg wheat, 120s. per quarter; rye, 80s. to 86s.; barley, 60s. to 63s.; oats 36s. to 80s., peas and beans, hardly any at market."

Postscript

Postscript to Scots Intelligence.

NORTHERN REPORT.

Regarding the preſent ſtate of our crops, I am ſorry to ſay that nothing very favourable can be mentioned. Not more than half the uſual quantity of wheat was ſown; or, in other words, what with the difficulty which attended the ſowing, and what has been ploughed down, not half the uſual quantity remains; and we cannot promiſe half of an average crop from its produce. Barley and oats look tolerably well, and are greatly improved by the late rains, which were much wanted before we received them. Some of the barley is in the ear. Peas, in general, are very indifferent. Hay harveſt is begun, but the crop is light. The Summer has hitherto been cold and ungenial. Some demand has lately been for cattle, which have ſold at pretty high prices. Beef and mutton ſell at 6d. per lb.; oat meal from 40s. to. 50s. per boll of 9 ſtones Dutch; bear meal from 32s. to 40s. per boll of 10 ſtones, oats 40s. to 50s. per boll of 5 firlots; barley, per boll of 4 firlots 40s. to 48s. I believe little wheat and peas have been ſold for theſe three months paſt. The late rain was very ſeaſonable for the turnip crop, which will now in all probability turn out a good crop. I heard of few complaints in this quarter from the ſlug or worm, that has been ſo much noticed in other parts. I truſt it will be in my power ſhortly to ſend ſome important information reſpecting the ſheep huſbandry of the northern counties, which I expect from a gentleman who has extenſive concerns in that line, and is well qualified for communicating ſuch information.

July 5.

Haddington, July 11.—Our wheat market was rather dull, and prices were lower this day than laſt. Higheſt prices 63s. 6d.; but only ſix bolls ſold at that rate. Current prices were from 55s. to 58s. Oats much as formerly; higheſt 50s.; but the quantity was not great. Barley advanced 2s.; and likewiſe peas and beans.

Obituary.

April 3. At London, William Hall, Eſq. of Whitehall, pariſh of Chirnſide, county of Berwick.

a strong clay, the continued cold wet weather injured it much; in many places there will not be half a crop. The field that you saw last summer in fallow near Moor park, is so very bad and thin, that beans have been planted upon a great part of it to make up the crop; the other half of the field is this year under summer fallow, and in as bad order as what you saw last year. The beans and pease in general promise to be an abundant crop, and the few oats sown, are good; little or no barley is grown in this county. In Hertfordshire, the wheats, upon the whole, appear to be good, and are much more forward than in Middlesex, being now all shot and in bloom; while many of the Middlesex fields have the ear still locked up in the blade. In Surry, the wheats are good, the oats and barley also look well, and several fields of rye are so forward, that if the present fine weather continues, we will not be long in having new grain at market. The husbandry round the metropolis, is much in the same state as usual at this time of the year. In Middlesex, which I have had more opportunities of examining than the other counties, the fallows are badly managed, they don't appear to have been cross ploughed, and are so full of couch, that the furrows are as green as a corn crop in the month of March. For three months past our markets have been advancing, notwithstanding the large importation of foreign grain; of late, the quantity of fine English wheat at market being small, and the quality of the foreign being so indifferent, that but a small proportion of it can be mixed with the other in grinding, has occasioned fine samples to advance considerably. Good oats from the same cause are likewise advanced, while ordinary qualities both of wheat and oats, have a very dull sale.

From the great demand from the north for the last two months, the prices of barley, hog pease and beans, have risen considerably. Smithfield market has been well supplied for the last three months, but, owing to the great demand for the navy, &c. prices at times have been very high. Vegetables of every kind have been sold in Covent Garden market for six weeks past, and, with green pease and other vegetables, are now in abundance, as are also strawberries, cherries, and currants. The hay crop round London is very good, and having a fortnight of fine weather, a great part is got stacked in excellent condition. The look of the hop vines in Kent at present is unfavourable. The duty is only estimated at 90,000 l., which some time ago was thought might reach from 150,000 l. to 200,000 l.; but if the fine weather continue, the crop may be considerably better than what appearances indicate.

State

State of the several markets this day.

Mark lane.

Foreign wheat, 100s. to 130s.
English ditto, 120s. to 153s.
Oats, 44s. to 58s.
Stained barley 46s. to 56s.
Kiln dried ditto, 50s. to 60s.
Fine malting ditto, 60s. to 73s.
Malt, 57s. to 80s.
Hog pease, (last week) 90s. to 100s.
Tick beans, 66s. to 76s.
Small ditto, 80s. to 86s.
All per quarter of 8 bushels Winchester.
Flour, 5l. 10s. per sack of 280 lb.
Bread, 18¾ d. per puartern loaf.
New potatoes, 15s. per cwt. retailed at 2d. and 2½d. per lb.

Smithfield.

Beef, 5s. to 6s. Lamb, 5s. 6d. to 7s.
Mutton, 5s. to 6s. Veal, 4s. to 6s. 4d.
Pork, 5s. to 6s. 8d. by the carcase.
Retailed prices per pound of 16 ounces.
Beef, 8½d. to 10d. Mutton, 8d. to 9d.
Lamb, 10.d to 12 d. Veal, 9d. to 10d.

St James's Hay market.

New hay, 4l. 10s. to 6l. per load.
Old ditto, 4l. 10s. to 7l. 10s.
Clover ditto, 7l. 7s. to 7l. 10.
Straw, 2l. 14s. to 3l. 3s.

Sheep skins, 3s. 4d. to 6s. 6d.; lamb ditto, 2s 6d. to 3s. 2d.; shearlings, 1s.; clover seed, 24s. to 90s. per cwt.; white ditto, 40s. to 100s.; trefoil, 34s. to 56.; rye grass, 16s. to 24s. per quarter; turnip seed, 40s. per bushel; rape seed, 46 l. to 52 l. per last; raw hides, 2s. to 3s. per stone of 8 lb.; market skins, 10s 6d. each; horse hides, 15s. to 16s. each; tallow, 3s. 8d. per stone of 8lb.; hops Farnham. 12l. 16s. to 14 l.; rent, 10l. 14s. to 13l.; Essex, 10l. to 15l. 10s.; Sussex, 10l. 18s. to 15l.

The

The average price of corn, by the last returns, is,

England.		*Scotland*	
Wheat	126s. 1d.	Wheat	94s. 2d.
Barley	66s. 8d.	Barley	57s. 7d.
Oats	48s. 7d.	Oats	48s. 9d.
Rye	88s. 7d.	Rye	55s. 9d.
Beans	76s. 8d.	Beans	83s. 6d.
Pease	79s. 8d.	Pease	87s. 1d.
Big	56s. 6d.	Big	49s. 4d.

All per quarter, Winchester.

Oat meal per sack, of 280 lb. -	83s. 7d.	Oat meal per boll -	43s. 8d.

There were imported, last week, into London, 2000 cwt. of bacon, 51 tuns of beef, 1500 cwt. butter, 10 cwt. cheese, 700 lib. of hops, 1266 quarters of oats, 3188 quarters of wheat, 1984 lib. Spanish wool, 1650 cwt. rice, and 300 tuns of pork.'

Extract of a Letter from a Farmer in Wales, datea June 26th.

" I was happy to receive a copy of the Farmers Magazine, and shall be proud if any information in my power to communicate. contributes to promote such an useful publication. Something of the kind is much wanted in this part of the kingdom, for we are far behind in point of improvement, and I know of no plan better calculated to spur on our farmers, than to let them see what is done by their brethren in other quarters.

We have here a great number of small farms, rented from 20l. to 60l. a-year, on which are kept from 4 to 10 cows, and perhaps not more than 10 acres of the driest spots are ploughed, yielding little more grain in a good year than is necessary for the support of the farmer's family; at present, there is not one in five of the farmers of that description, but what is under the necessity of purchasing corn, and even many of a higher class are in the same situation. We have a few farmers who rent from 100l. to 500l. of land; but, in general, we don't like the plough, the expence being so great as to eat up all the profit, and, unless we can be brought to change our present customs altogether, it will never be otherways. Our ploughing is chiefly performed with oxen, and the farmer who attempts sending his team into the field with less than six of these animals, may lay his account with being the *talk* of the country. It is common to see eight large oxen in one plough, stirring the barley land, so that the very best land on the farm is employed in raising hay and pasture-grass for the support of the working stock. There are more horses used of late than formerly

metly, but four is the number usually yoked. Two horse in a plough was never heard of here till I came to this country, though I think, under proper management, oxen might be employed with advantage; and I shall give reasons in support of this opinion in a future communication.

A good deal of the land here is pared and burned, which is found to do well upon the old meadows. We don't pay much attention to dung, except when required for the turnip-fields, which have of late greatly increased. Our chief manure is lime, with which this country abounds; the quality various. The general method is, to lime every fifth year, and the common rotation upon the dry land is fallow, wheat, barley, clover, and wheat. This year, wheat after clover is looking better than after fallow, though the crop is in general very thin, and nothing like to what it was last year, at this time; the late dry weather has been in its favour, and it looks tolerably healthy. Some fields are beginning to shew the ear. The dry gravels have the best appearance, as the wetness of April and May was beneficial to land of that description, but the clays have suffered much, and, to all appearance, will not produce half a crop, the late sowing and the bad seed used being much against it. Our markets are high for every article. Wheat is 48s. and 50s. per bushel, of 20 gallons (27 bushels Winchester); barley, 30s.; oats, not to be got; oat-meal sells at 1s. per quart, but there is little used in this part of the country. Potatoes are very dear, both old and new; the latter sold in Cardiff-market, on Saturday, at 6d. per lib.; beef from 6d. to 9d.; mutton 8½d.; veal 6d.; lamb 6d.; dry bacon 14d.; butter from 10d. to 1s.; cheese of new milk 8d.; ditto of ewe-milk 9d.; ditto of skimmed milk 6d.; all per pound of 16 ounces; hay 6l. per tun; straw equally as high in proportion. The crop of hay seems a middling one this year. The clover and rye-grass harvest is mostly finished, and we will soon begin to cut the meadows, which are generally sufficient work till the corn-harvest arrives."

NORTHUMBERLAND QUARTERLY REPORT.

The crops upon dry soils are in general looking well; but upon clays,—strong loams,—wet,—and cold bottomed lands, the appearance is very unpromising; a great failure has been occasion, on such soils, by the destructive effects of the *Beetle Grub* *, particularly in the wheat and oats, sown upon clover

* This Grub, is from 1 inch to 1¼ inch long, of a brownish grey colour: Some of them were put in a box with earth, and regularly fed, but have not yet made any change; others have been opened, and the embryo of the Black Beetle taken out of them.

leas;

leas; many fields have been so completely eaten off, that they have been plowed up again for fallow; some were sown with barley, which has also been very much injured, and, in many places entirely destroyed. The loss, I am afraid, is much more extensive than is at present imagined. A good deal will depend upon favourable weather, and a fine harvest; but from present appearances the crop, upon such soils, cannot be estimated at more than half of the usual average; and the harvest will not be early.

Turnips, sown the beginning of June, are looking very healthy; what have been sown the latter end of the month, and in July, want rain to bring them forward, particularly upon adhesive soils, which were so saturated with wet last year, that they have wrought very unkindly for turnip fallow, and could not be brought to that mellow pulverized state, so necessary for the vegetation of small seeds.

Potatoes are looking well, and appear to have little of the curl.

Pastures have been very bad, and hay is expected to be a light crop; unless favourable rains come very soon.

The young clovers, in many places, have been much injured by the small grey snail.

The markets for fat stock, were at their height about the middle of May, when beef was from 12s. to 13s. per stone, sinking the offal, and mutton 9d. per lb.; but have been coming down ever since; the prices for beef, are now, from 7s. to 10s. per stone, according to fatness; and mutton, 7s. to 8s. per lb.

The wool growers expected a considerable advance on last year's prices, but the buyers do not seem willing to give more, that is, 9d. to 10d. per lb. for long wool; and 1s. 1d. to 1s. 3d. for short wool. The fleeces take of very light, and the crop of wool, in respect to weight, is thought to be considerably under the average.

The corn markets have kept advancing; the present prices are,

Wheat,	14s. 6d. per Winchester bushel.	
Barley,	8s. 4d.	ditto
Oats,	7s. 6d.	ditto
Pease,	14s. 4d.	ditto

Extract of a letter from Newcastle, July 2d.

"Our crops here, and in the neighbourhood, are far from being so promising as in the southern counties. The oat crop in particular looks ill, and, in many parts, the first sowing was ploughed down, and fresh seed sown. Our prices are, Konningsberg wheat, 120s. per quarter; rye, 80s. to 86s.; barley, 60s. to 63s.; oats, 56s. to 80s.; pease and beans, hardly any at market."

Postscript

Postscript to Scots Intelligence.

NORTHERN REPORT.

Regarding the present state of our crops, I am sorry to say, that nothing very favourable can be mentioned. Not more than half the usual quantity of wheat was sown; or, in other words, what with the difficulty which attended the sowing, and what has been ploughed down, not half the usual quantity remains, and we cannot promise half of an average crop from its produce. Barley and oats look tolerably well, and are greatly improved by the late rains, which were much wanted before we received them. Some of the barley is in the ear.—Pease, in general, are very indifferent. Hay harvest is begun, but the crop is light. The summer has hitherto been cold and ungenial Some demand has lately been for cattle, which have sold at pretty high prices. Beef and mutton sell at 6d. per lib.; oat meal from 40s. to 50s. per boll of 9 stones Dutch; bear meal from 32s. to 40s. per boll of 10 stones: oats 40s. to 50s. per boll of 5 firlots; barley, per boll of 4 firlots, 40s. to 48s. I believe little wheat and pease have been sold for this three months past. The late rain was very seasonable for the turnip crop, which will now, in all probability, turn out a good crop. I have heard of few complaints in this quarter from the slug or worm, that has been so much noticed in other parts. I trust it will be in my power shortly to send some important information, respecting the sheep husbandry of the northern counties, which I expect from a gentleman who has extensive concerns in that line, and is well qualified for communicating such information. *July* 5.

Haddington, July 11.—Our wheat market was rather dull, and prices were lower this day than last. Highest price 63s. 6d., but only six bolls sold at that rate. Current prices were from 55s. to 58s.; oats much as formerly, highest 50s., but the quantity was not great. Barley advanced 2s., and likewise pease and beans.

OBITUARY.

April 3d, at London, William Hall, Esq. of Whitehall, parish of Chirnside, county of Berwick.

A correspondent in Berwickshire, to whom we applied for information respecting Mr Hall's agricultural operations, says, "Before my arrival in this county, Mr Hall was become very old, and in a great measure incapable of attending to agricultural affairs. I have been told, and I believe with truth, that his pursuits in that line were extremely injurious to his fortune; and that he farmed away a great part of a fine eſtate. I should rather hold him up as a terror to gentlemen against becoming farmers, than as an example for their imitation,—I mean in farming. Some very good hedge management was practised on his estate, but by no means regularly followed out; I have seen the same a kind of basket work plashing in England. He had tolerable notions about lining out roads; but was almost always opposed by the other gentry, so that his ideas, if good, were seldom, if ever, carried into execution."

Mr David Cooper, farmer at Celary, county of Wigton, much regreted.

Peter Dudgeon, Esq. of East Craig, and farmer at Byres, county of East Lothian, an extensive and skilful grazier.

The following particulars concerning this gentleman, are extracted from the 2d vol. of Wight's "*Present state of Husbandry in Scotland*," published in 1778.

"Peter Dudgeon, tenant at Byres, has a great character in that country, for skill both in corn and grass. I would be reproached by our brethren, if so eminent a cultivator and grazier were not particularly taken notice of. He rents 1000 acres from the Earl of Hopetoun, and about 800 from others, by his own account, for which he pays about 1600 l. Sterling of rent. Mr Dudgeon is held to be the best grazier in this county. He has commonly 1400 acres under grass, and knows how to improve his stock as well as his land: His chief rule is that of stocking lightly, to afford at all seasons plenty of food. And, by the thriving of the stock, the land is also improved."

At Newton, near Barnistone, Yorkshire, aged 90, Mr Francis Ellerton, an eminent farmer; he was carried to his grave by eight grandsons, and attended by 20 nephews.

At Barran upon Trent, Derbyshire, Mr Joseph Sharpe, farmer; who fell into a ditch in his own grounds, and was drowned.

At Adney, near Neuport, Shropshire, aged 83, Mr Leversage, a very respectable farmer.

At Broughton, Northamptonshire, Mr John Waters, senior, an eminent salesman and dealer in cattle.

At Lenham, Rent, aged 77, Mr Robert Mercer, a wealthy and respectable farmer.